

Drawing Amendments:

The attached 39 sheets of drawings include changes to FIGs. 1-43 correcting various informalities identified during the prosecution of the related cases. No new matter has been introduced. These sheets replace the original sheets including FIGs. 1-43.



REPLACEMENT
DRAWING

App. No. 09/491,121
Inventor: Branko Kovacevic et al.
Attorney: J. Gustav Larson (512 327-5515)

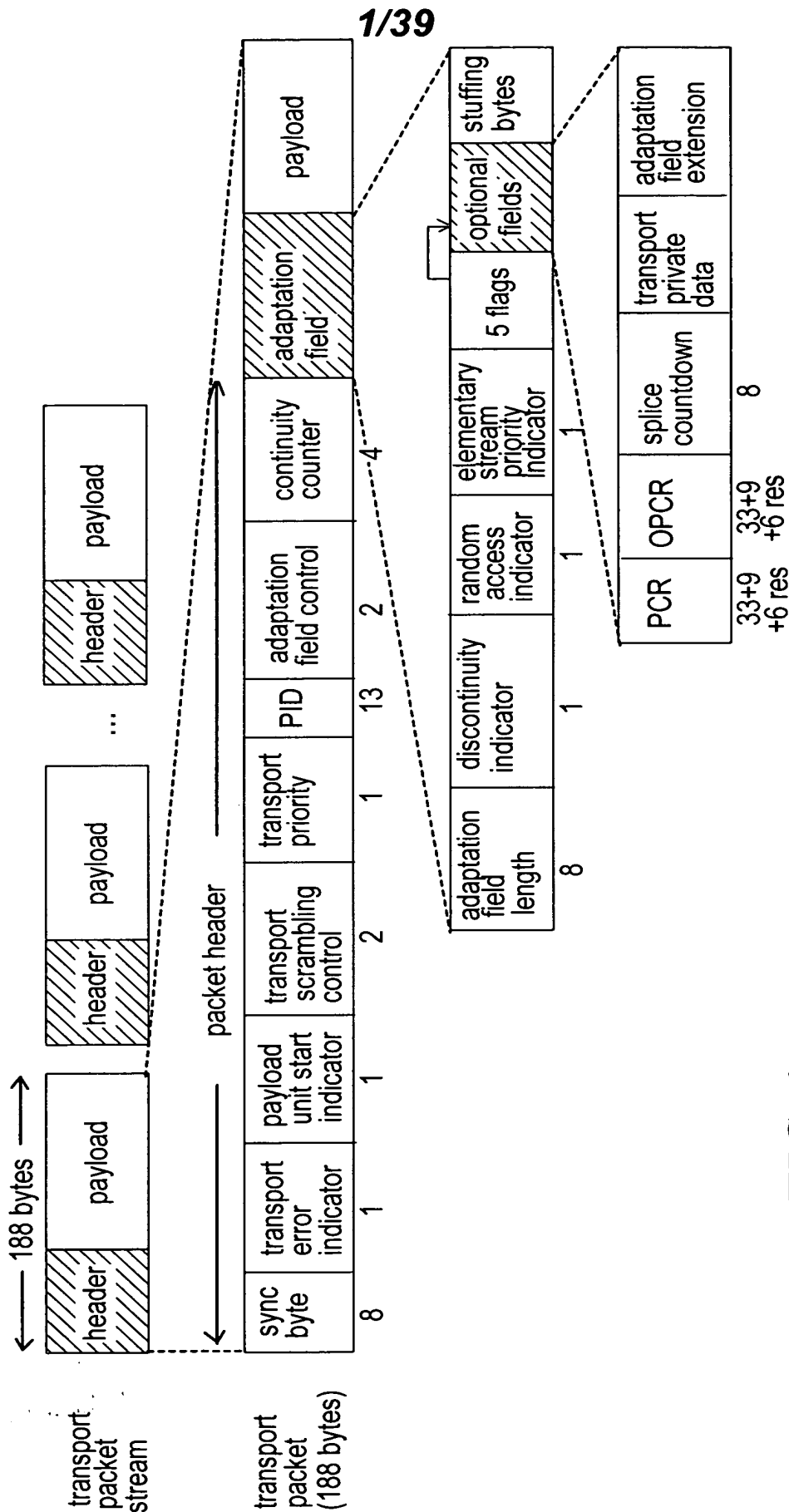


FIG. 1
--PRIOR ART--



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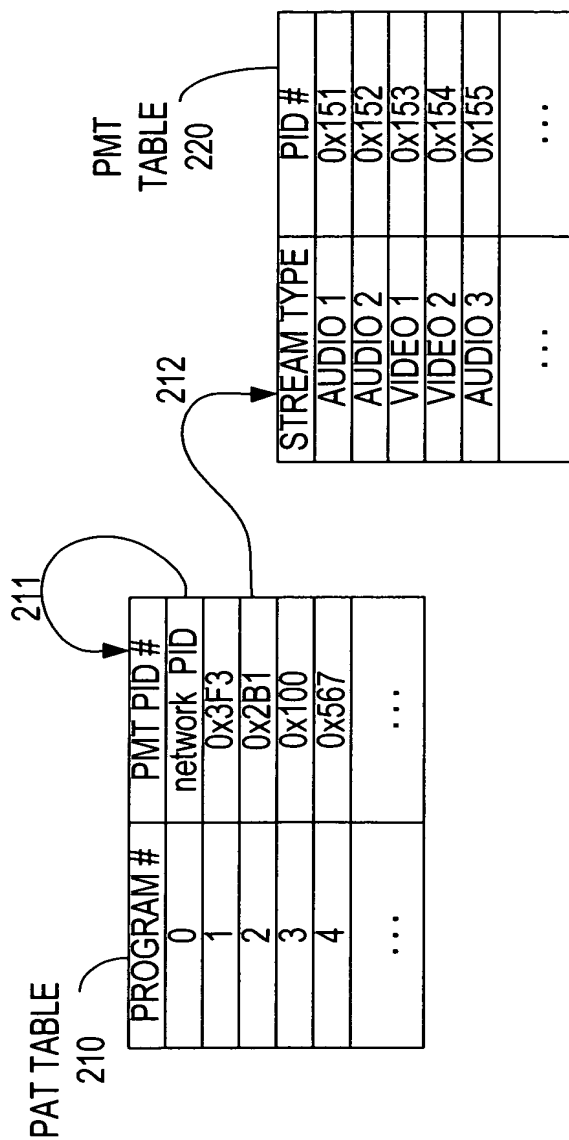
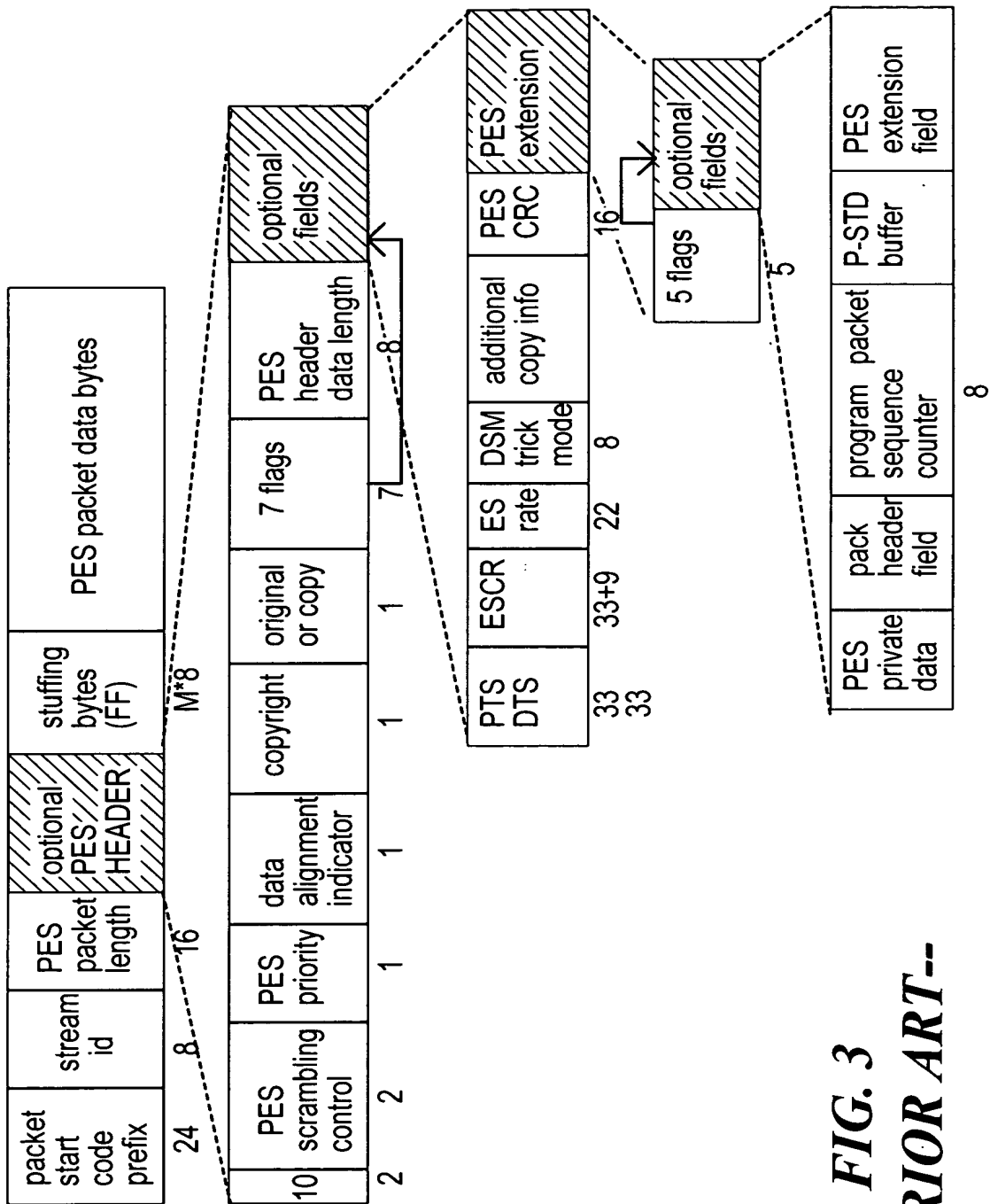


FIG. 2
--PRIOR ART--



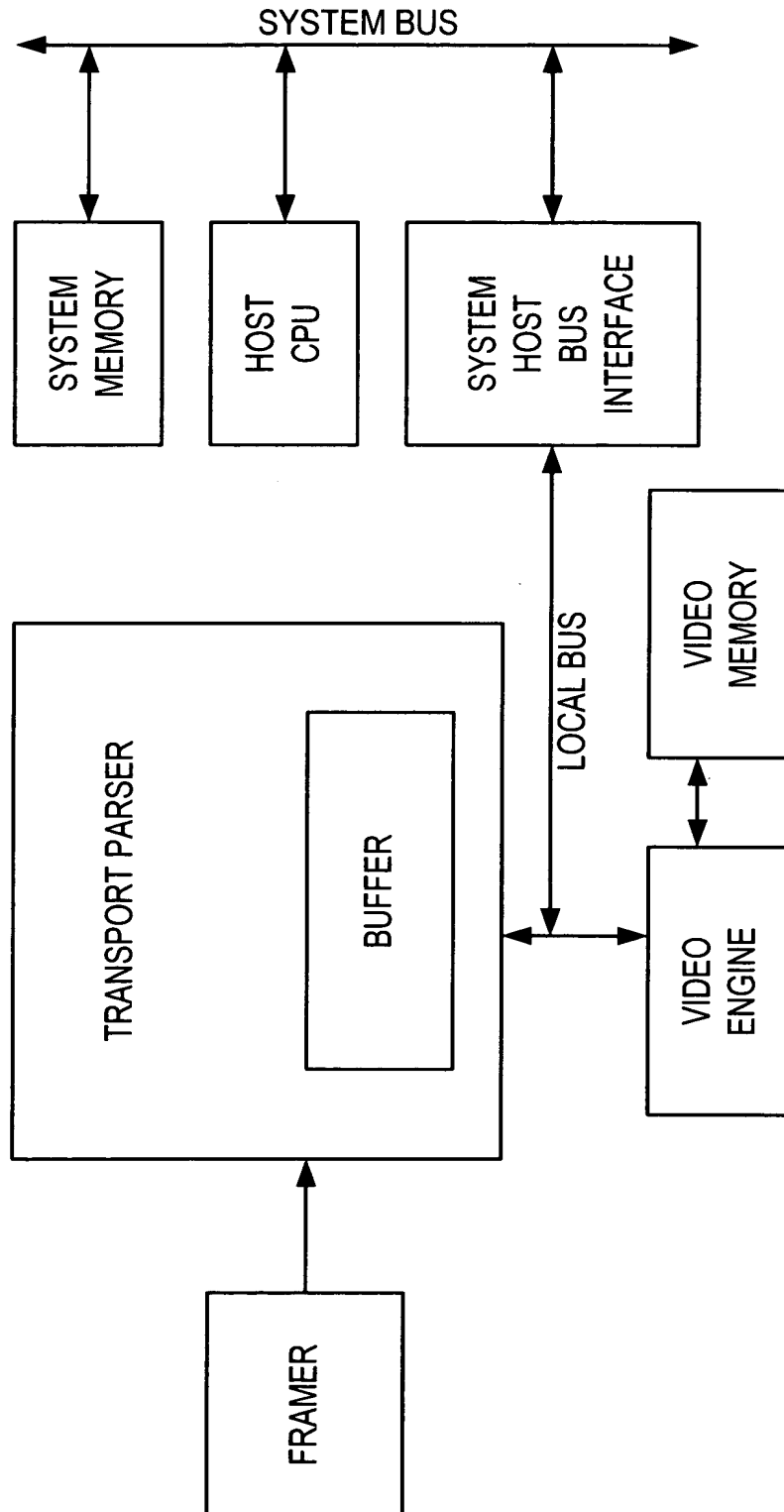
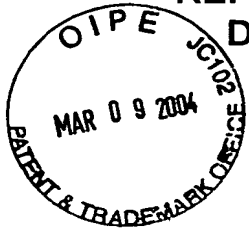


FIG. 4
--PRIOR ART--



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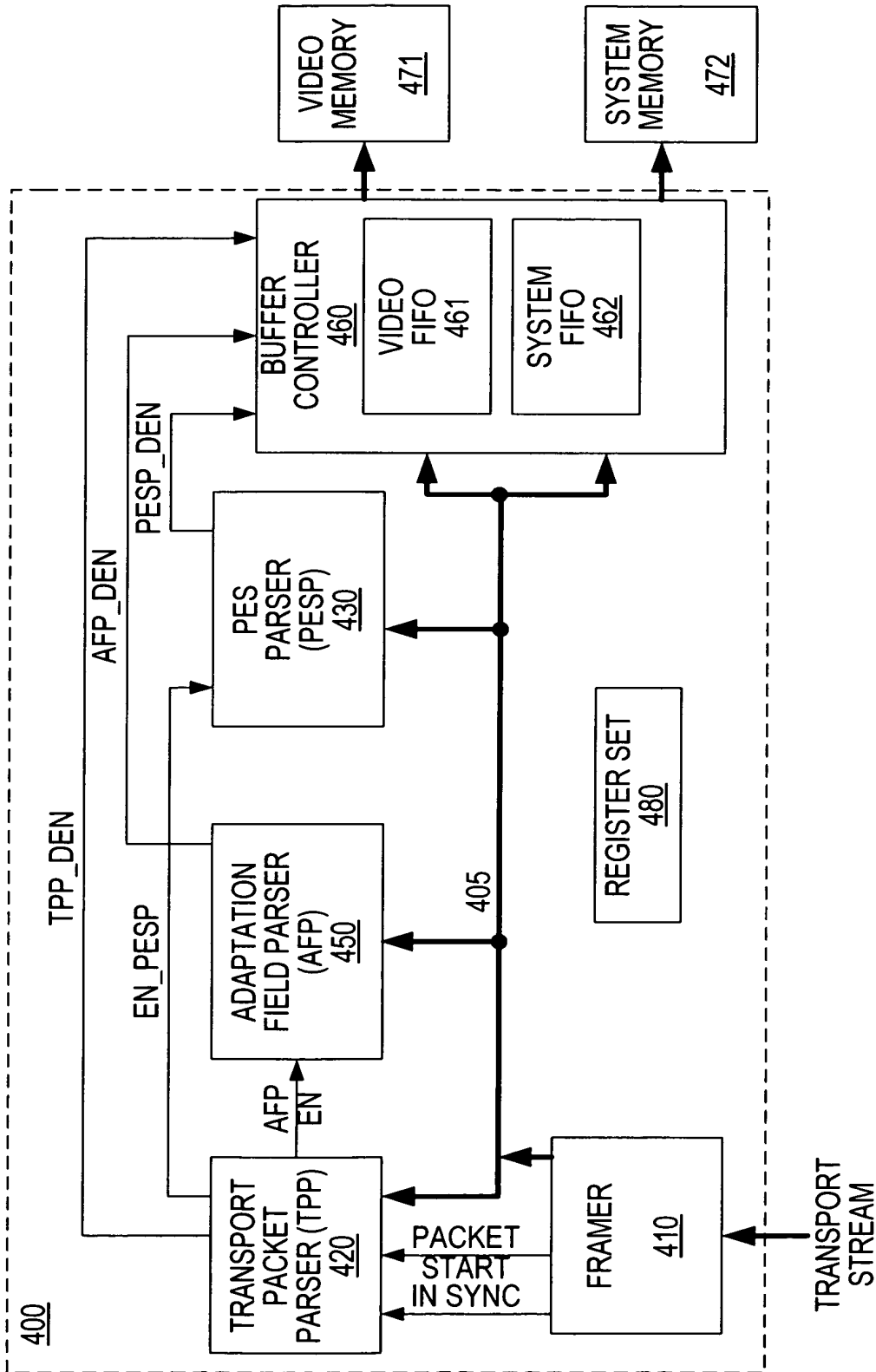


FIG. 5

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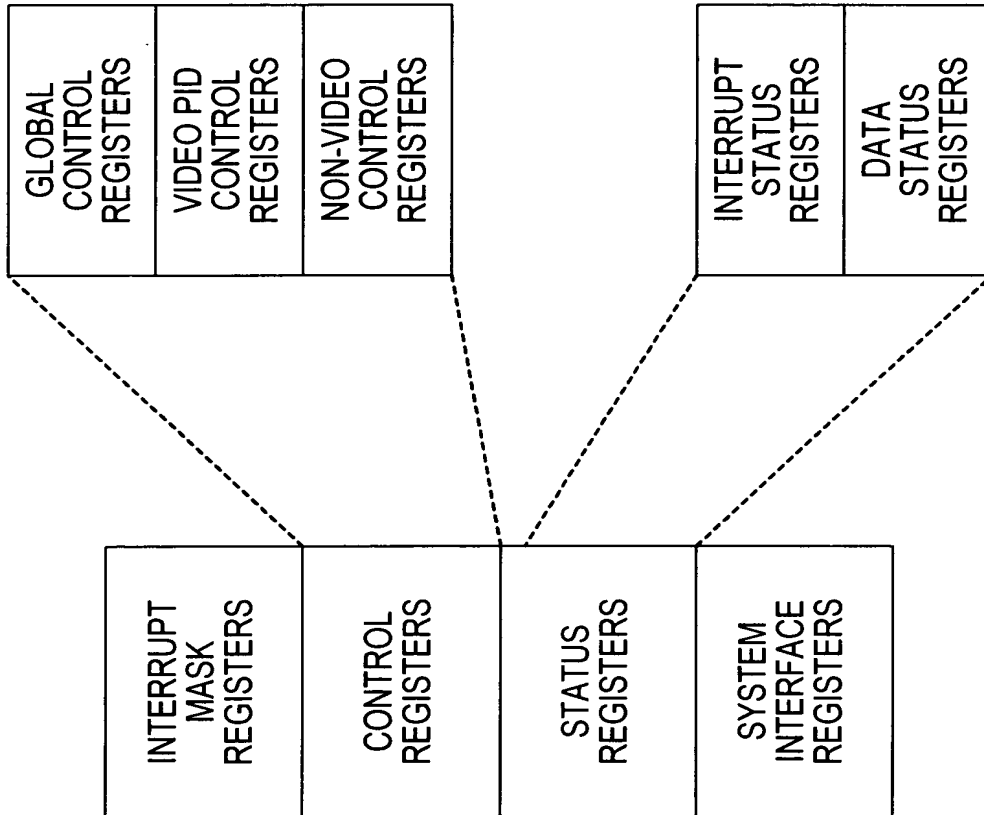


FIG. 6

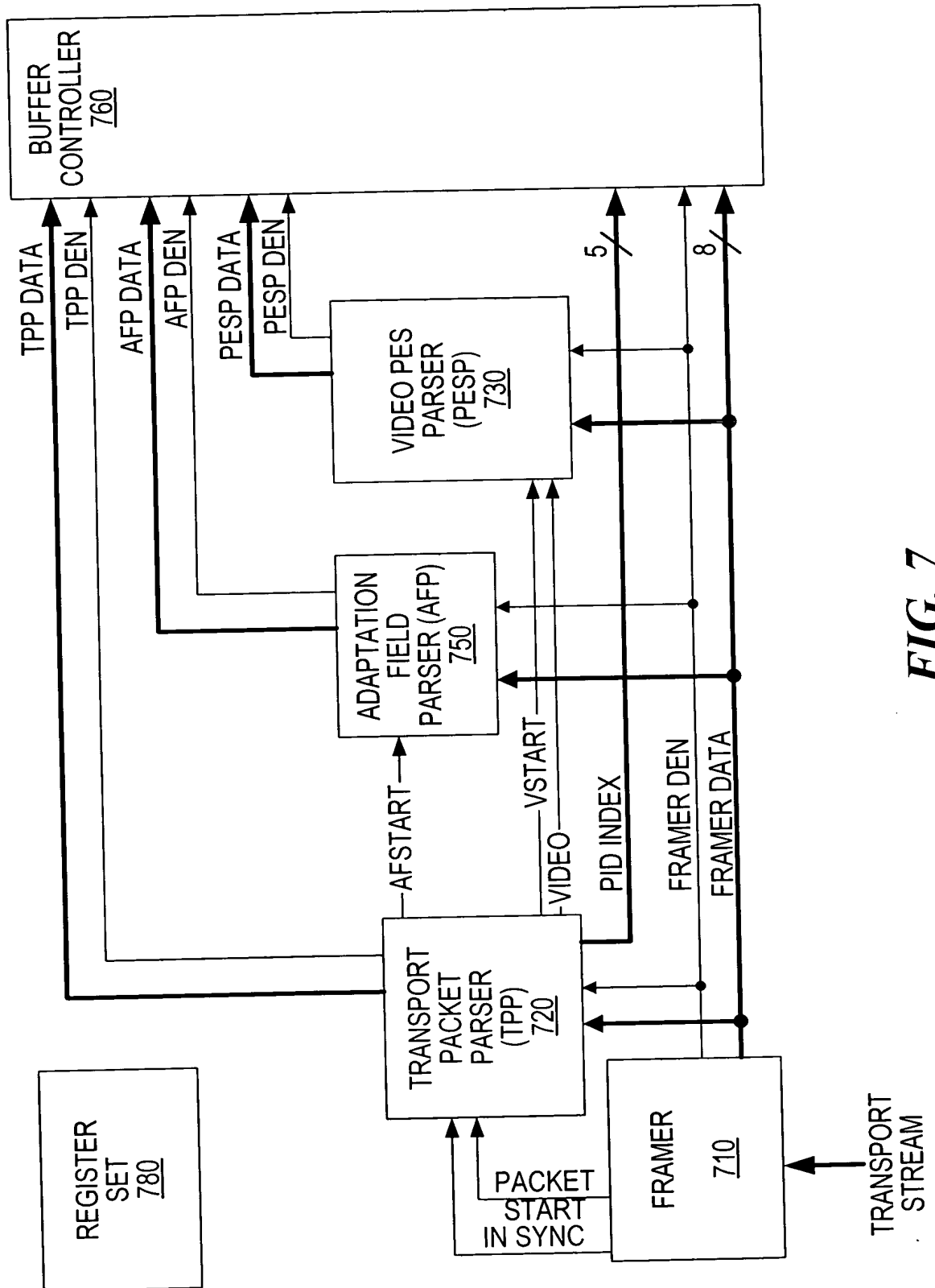


FIG. 7

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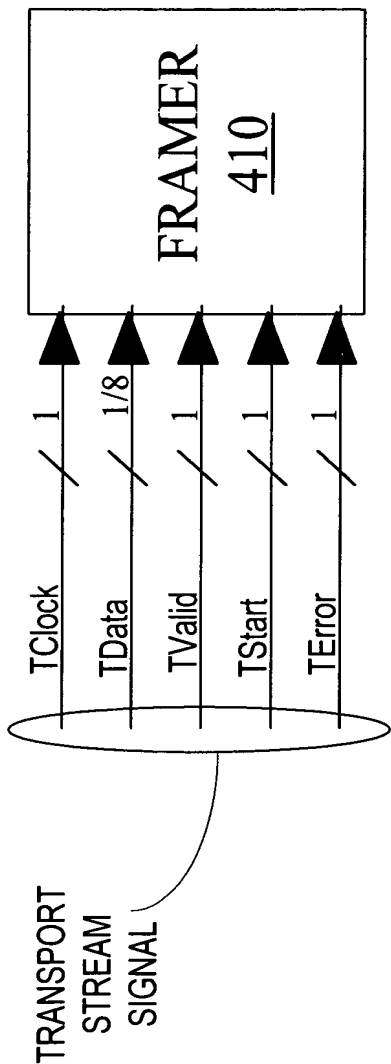


FIG. 8

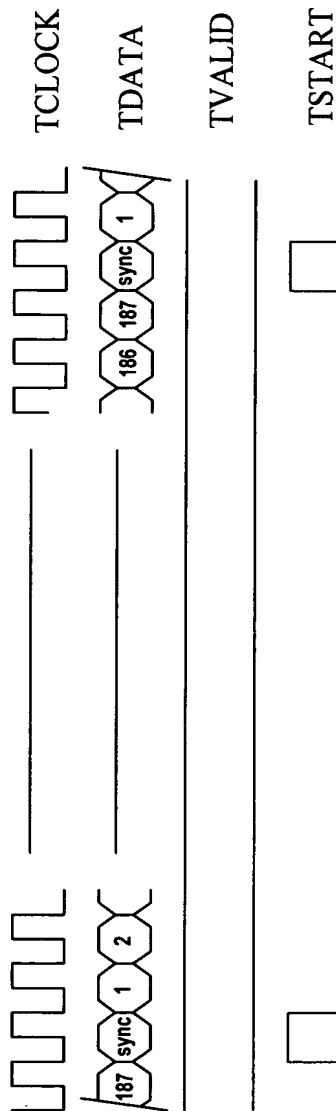


FIG. 9

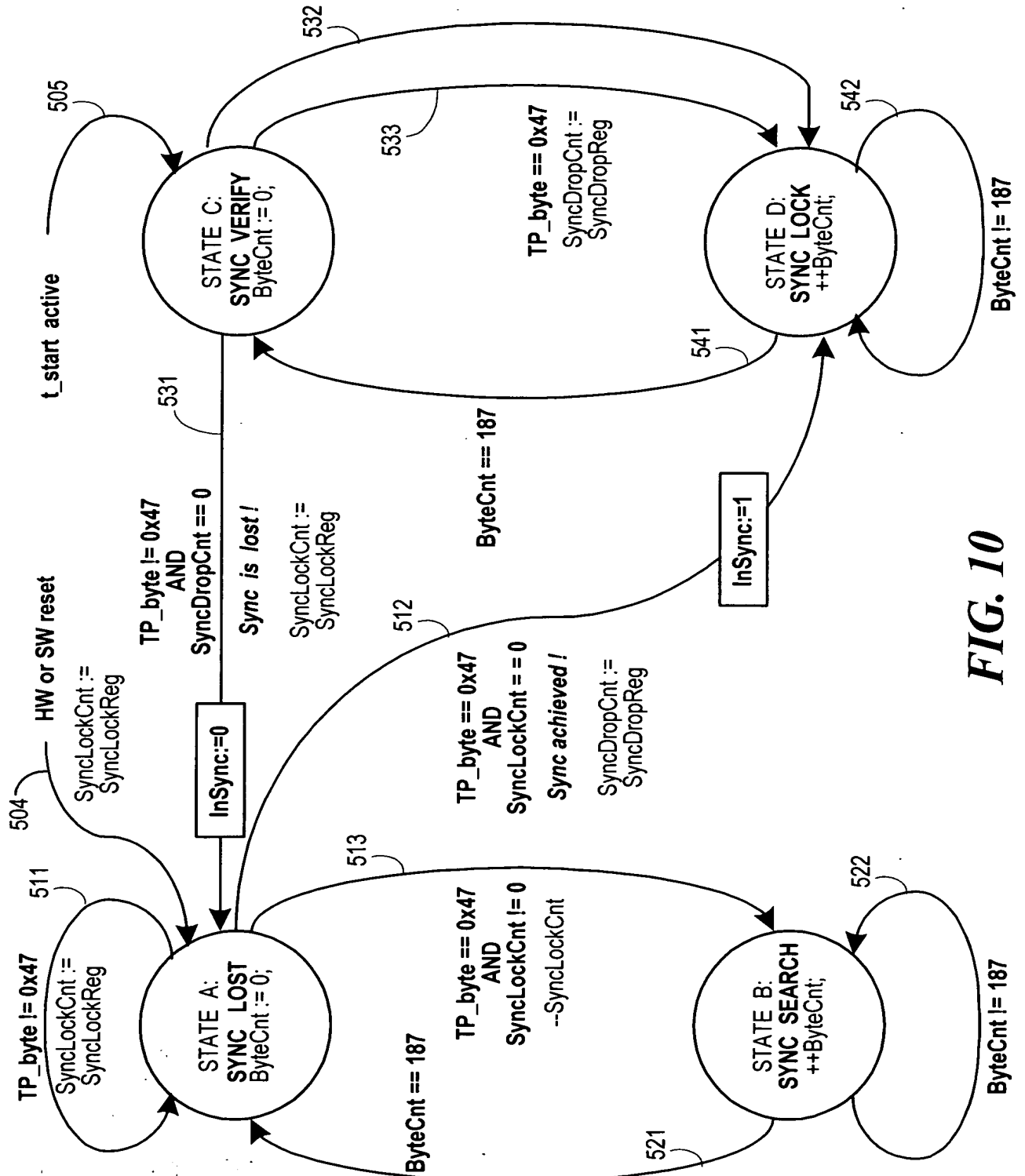
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TP_byte != 0x47
AND
SyncDropCnt != 0
--SyncDropCnt



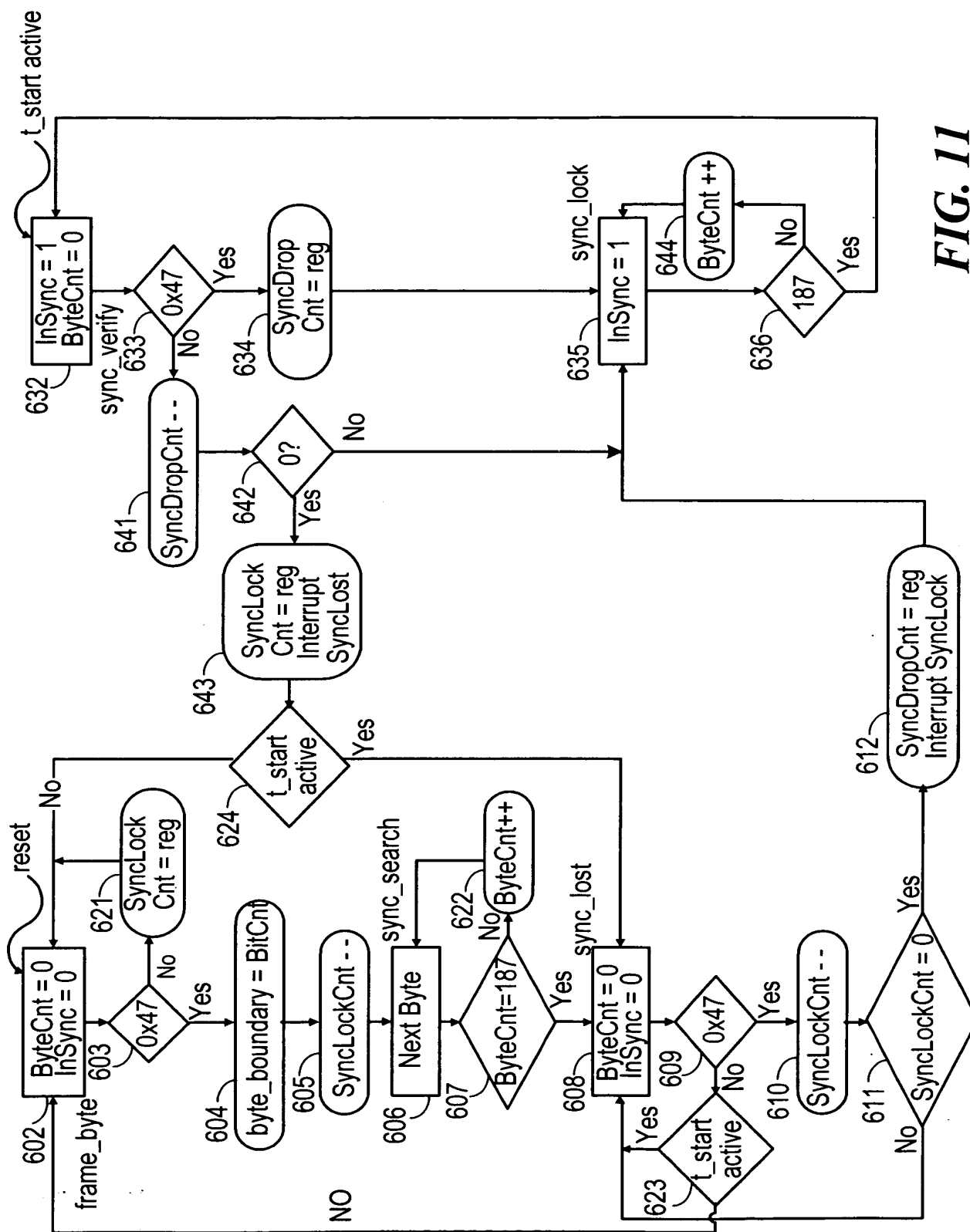


FIG. 11

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Transport Demultiplexer Global Status Register				
Field Name	Bits	Len	Default	Type Description
FramerSyncLock	0	[1]	0	R/W This bit is set to '1' after the frame synchronization has been acquired. WR_ACC_CLEAR.
FramerSyncDrop	1	[1]	0	R/W This bit is set to '1' after the frame synchronization has been lost. WR_ACC_CLEAR.
CurrentFramerState	20-22	[3]	'000'	R This 3 bit field codes the current state of the framer: '000' – Capturing a byte '001' – Out of TP frame synchronization '010' – Searching for synchronization '011' – Checking for synchronization '100' – In the TP frame synchronization NOTE: Only a framer state machine updates this field. Write access does not modify it.
UnusedField	29-31	[3]	'000'	R/W Unused and reserved field.

FIG. 12

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Transport Demultiplexer Interrupt Mask Register				
Field Name	Bits	Len	Default	Type
EventInterruptMask	0-18	[19]	0	R/W
Description If set to '1' enables local sources of interrupts. Bit 0 – FramerSyncLock Bit 1 – FramerSyncDrop Bits 2 – 19 Other Functionality				
EnableGlobalDemuxInterrupt	20	[1]	0	R/W
UnusedField	21-31	[11]	0	R/W
If set to '1' enables globally TD core interrupts. Unused and reserved field. Always set to 0.				

FIG. 13

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Transport Demultiplexer Global Control Register				
Field Name	Bits	Len	Default	Type
FramerSyncLockLength	0-4	[5]	00101	R/W
Description				
Five bits field to select a number of consecutive transport packets after MPEG-2 frame (bit-stream) synchronization is declared.				
FramerSyncDropLength	5-7	[3]	011	R/W
Description				
Three bits field to select a number of consecutive transport packets after a loss of MPEG-2 frame synchronization is declared.				
FramerBitPolarity	8	[1]	0	R/W
Description				
'0' selects msb first (default mode), '1' select lsb first				
FramerClockPolarity	9	[1]	0	R/W
Description				
If set to '0' framer will latch on falling edge (default) If set to '1' framer will latch on rising edge.				
FramerMode:	10-11	[2]	'00'	R/W
Description				
Defines a combination of external control signals: '00' – Framer uses T_start only. '01' – Framer uses T_valid only. '10' – Framer uses T_start and T_valid. '11' – Framer uses T_clock and T_data only.				
Other functionality (not relevant to Framer)				
Other Functionality Bits	12-15	[4]		
T_ValidPolarity	16	[1]	1	R/W
T_StartPolarity	17	[1]	1	R/W
T_ErrorPolarity	18	[1]	1	R/W
Description				
'1' selects active high [5V] for t_valid external signal '1' selects active high [5V] for t_start external signal '1' selects active high [5V] for t_error external signal				
Other Functionality Bits	19-28	[10]		
Description				
Other functionality (not relevant to Framer)				
UnusedField	29-31	[3]	0	R/W
Description				
Unused and reserved field. Always set to 0.				

FIG. 14

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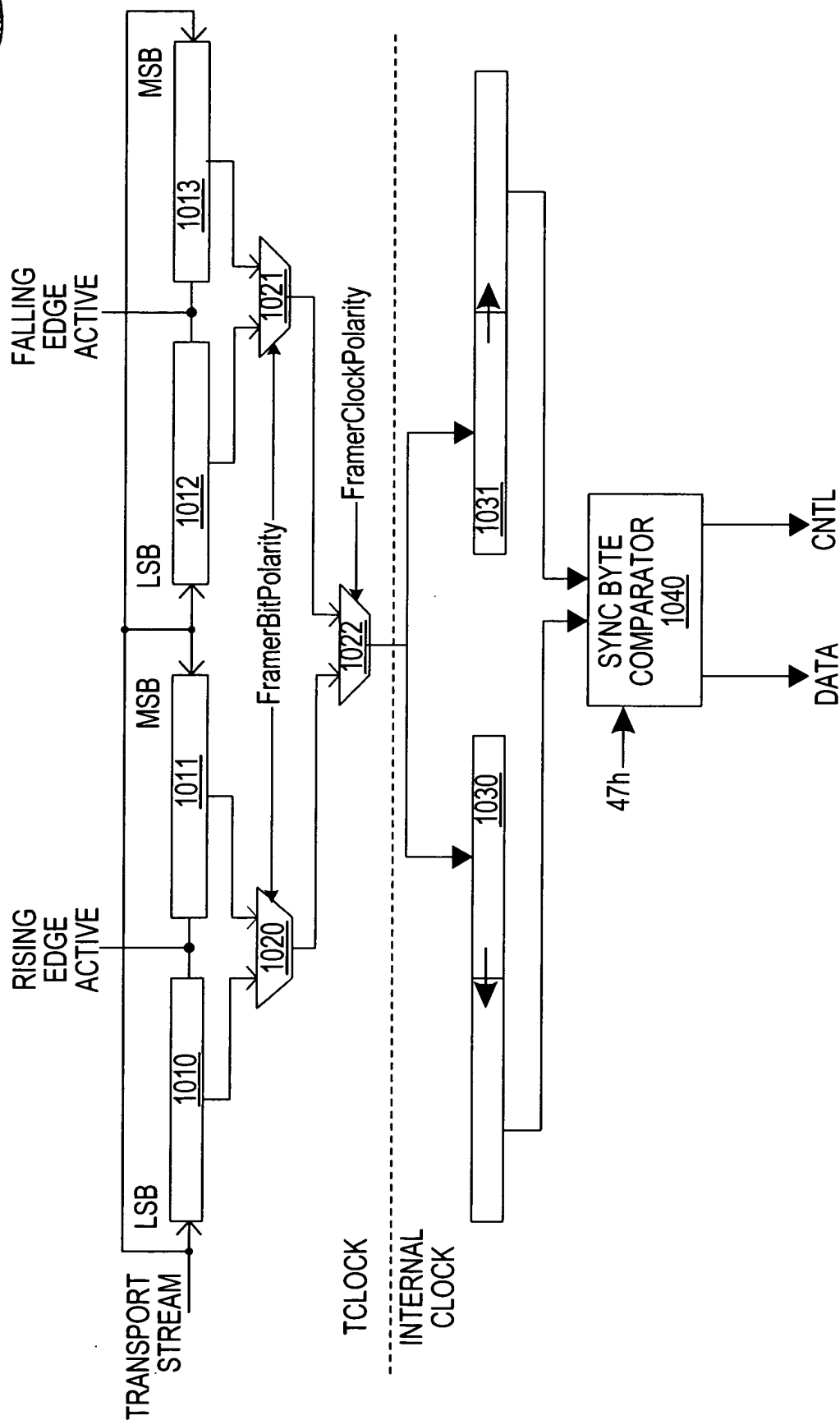


FIG. 15

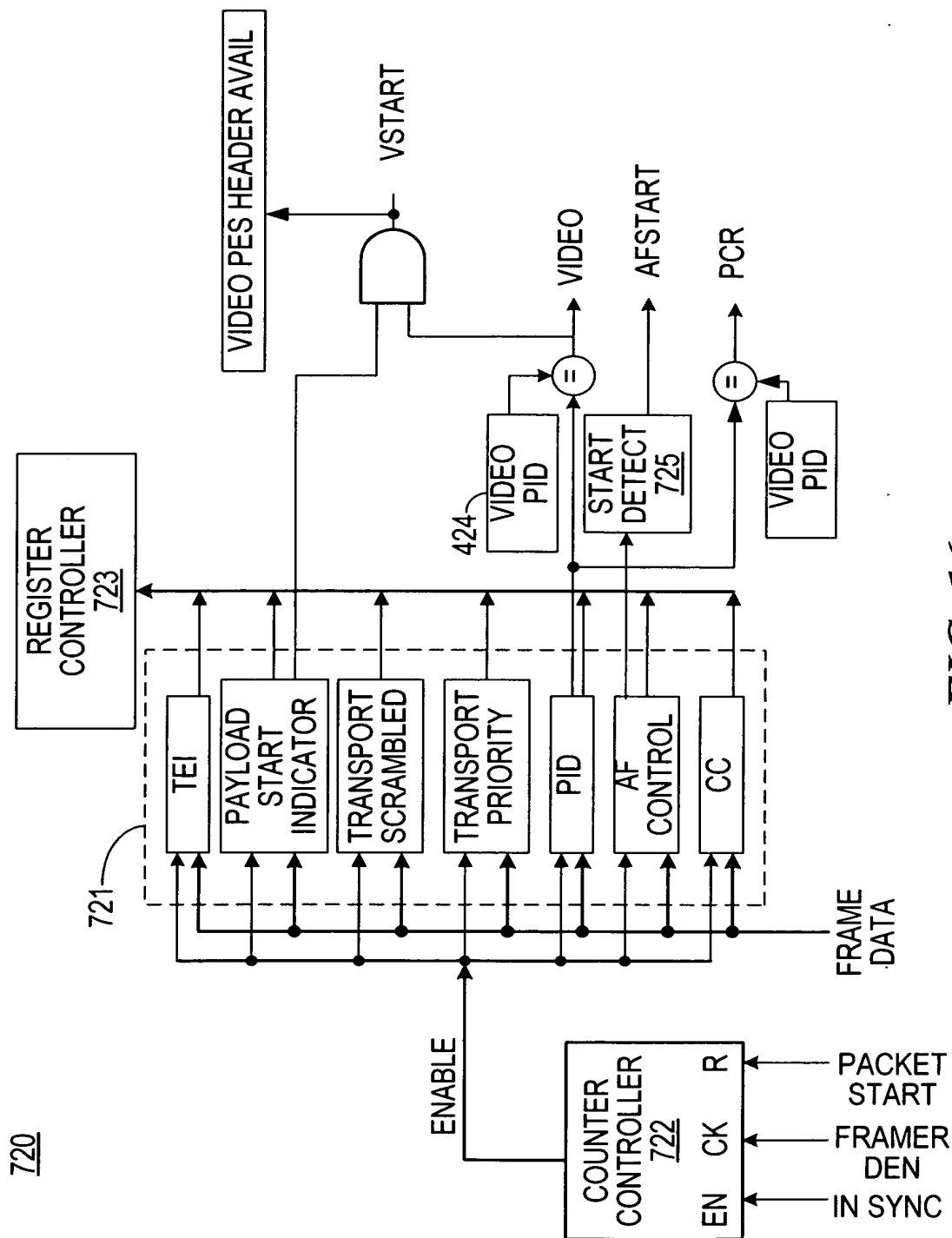


FIG. 16



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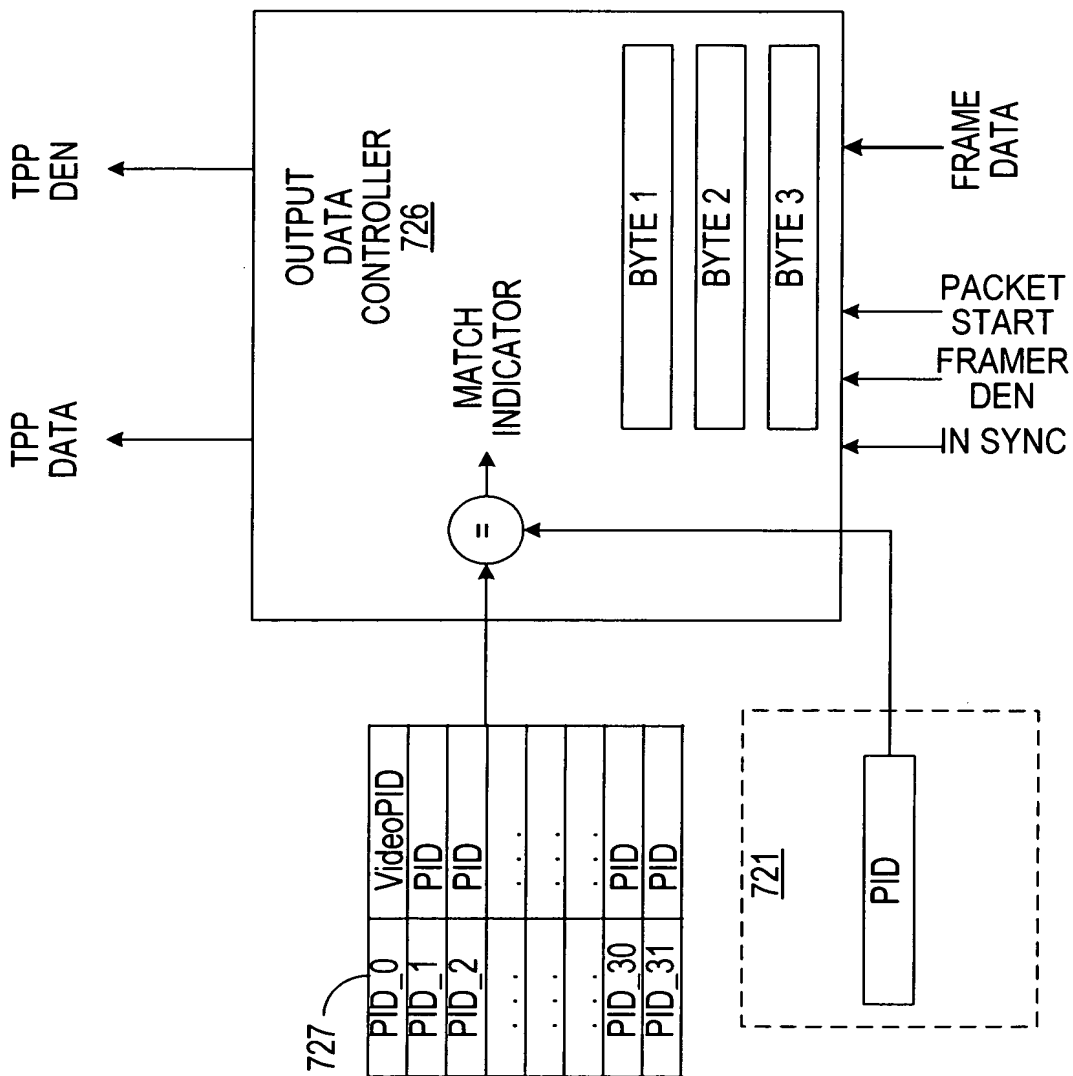


FIG. 17



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Video Control Registers			
Field Name	Bits	Len	Type
VideoPid	0-12	[13]	R/W
EnableParsing	13	[1]	R/W
StartFromPUSICCommand	14	[1]	R/W
ProcessStreamID	15	[1]	R/W
StreamID	16-23	[8]	R/W

FIG. 18

Transport Demultiplexer Registers			
Field Name	Bits	Len	Type
PID_yz, 0 ≤ yz ≤ 30	0-12	[13]	R/W
EnableParsing	13	[1]	R/W
BufferIndex	14-17	[4]	R/W

FIG. 19

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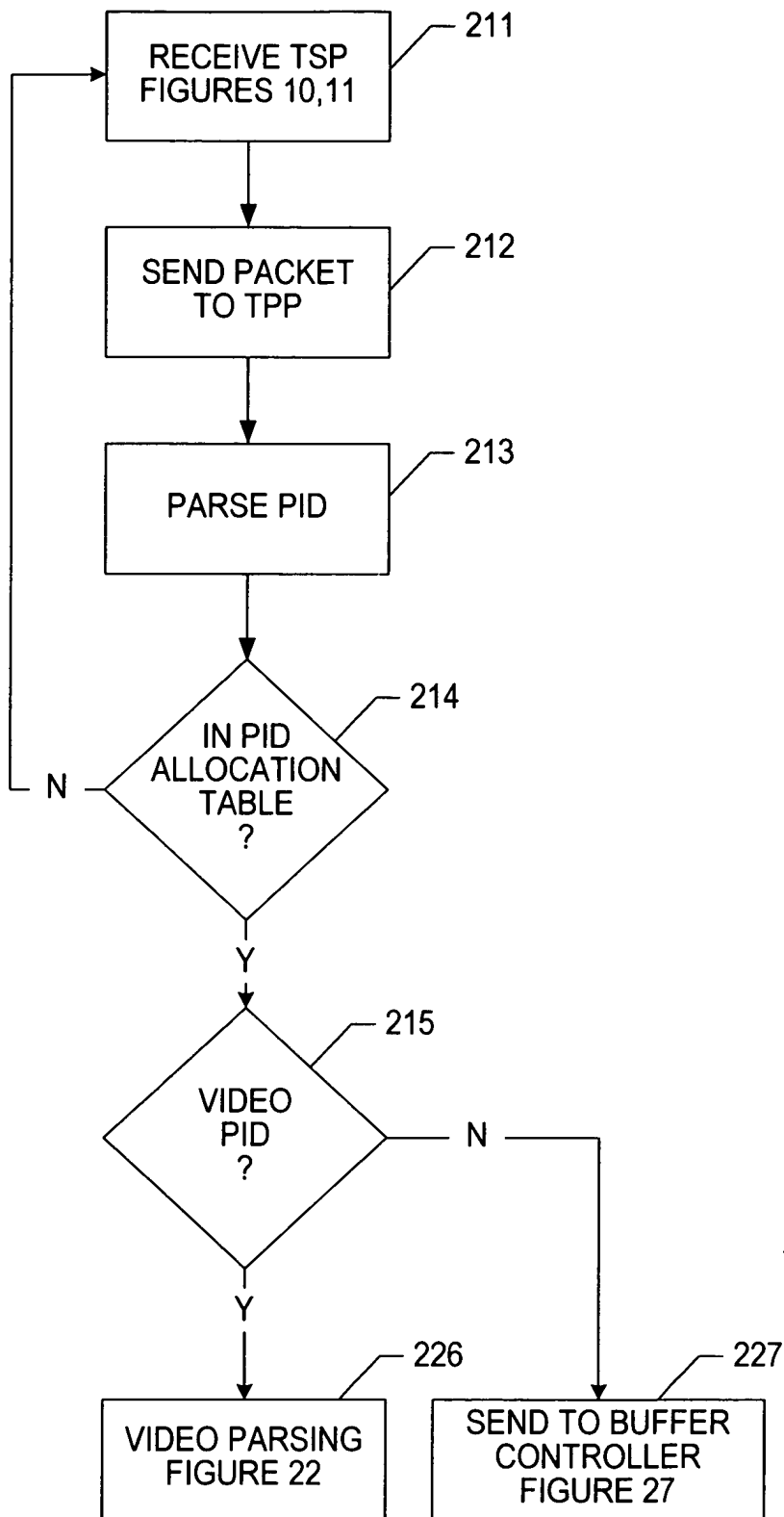
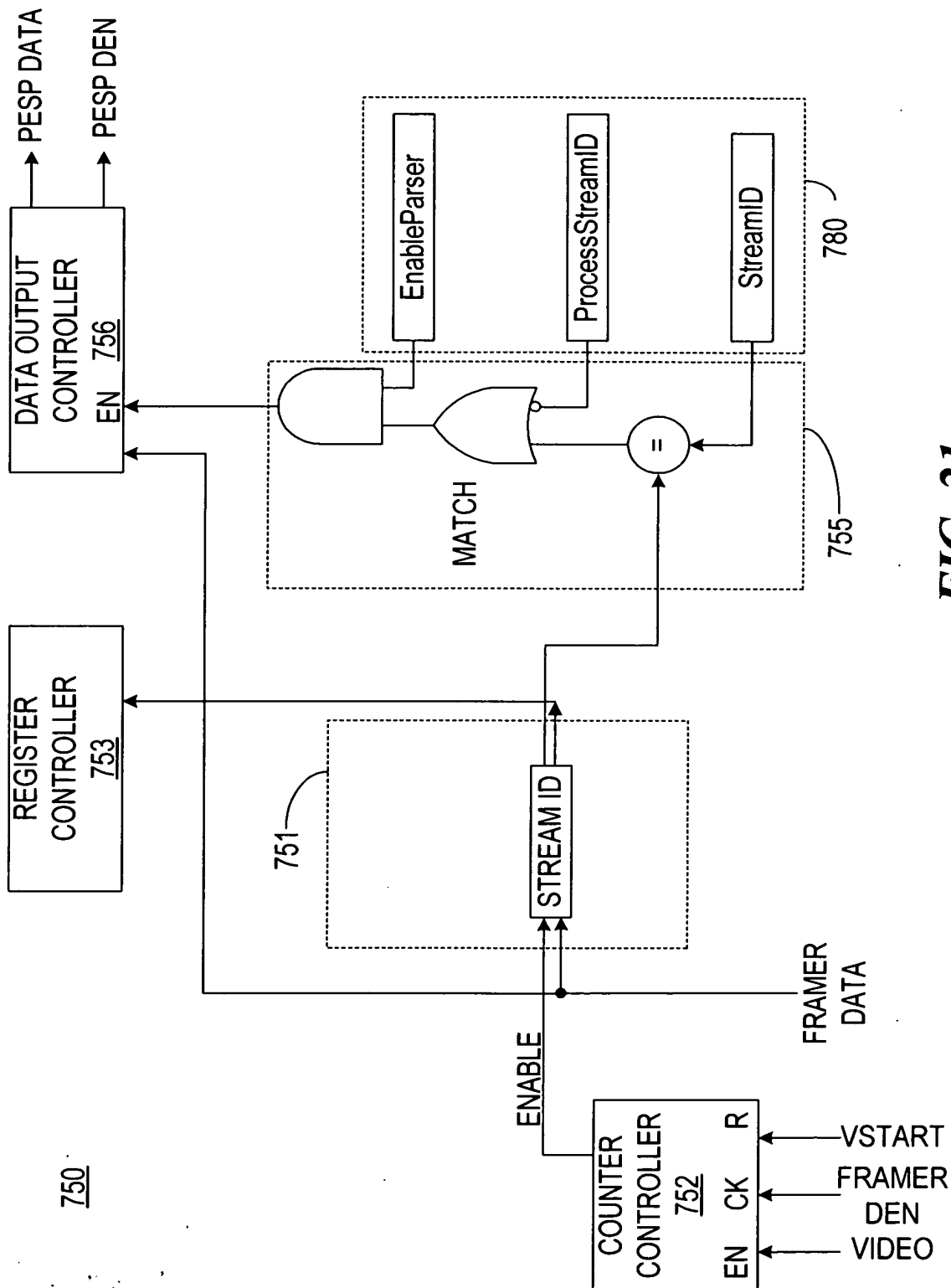


FIG. 20

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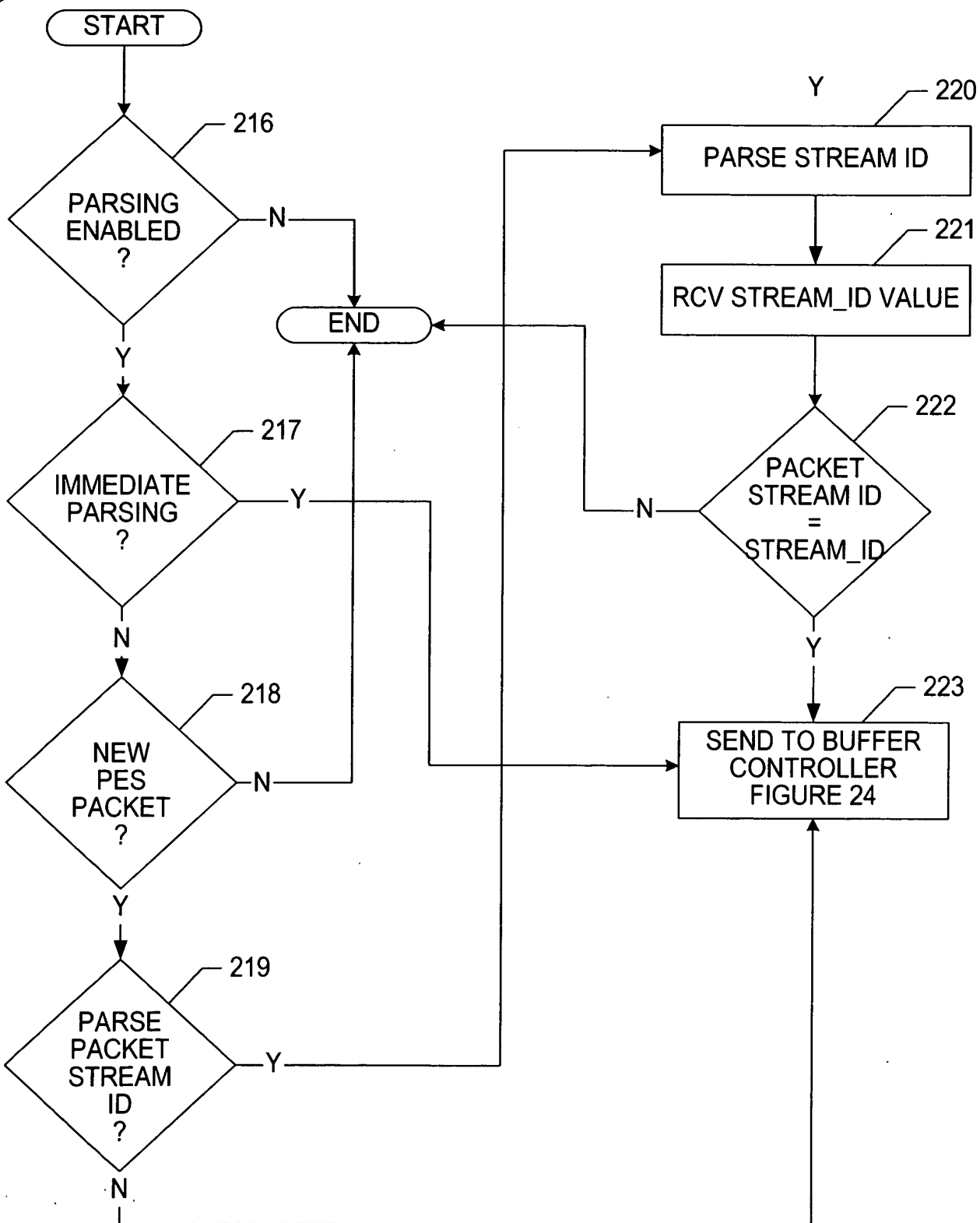


FIG. 22

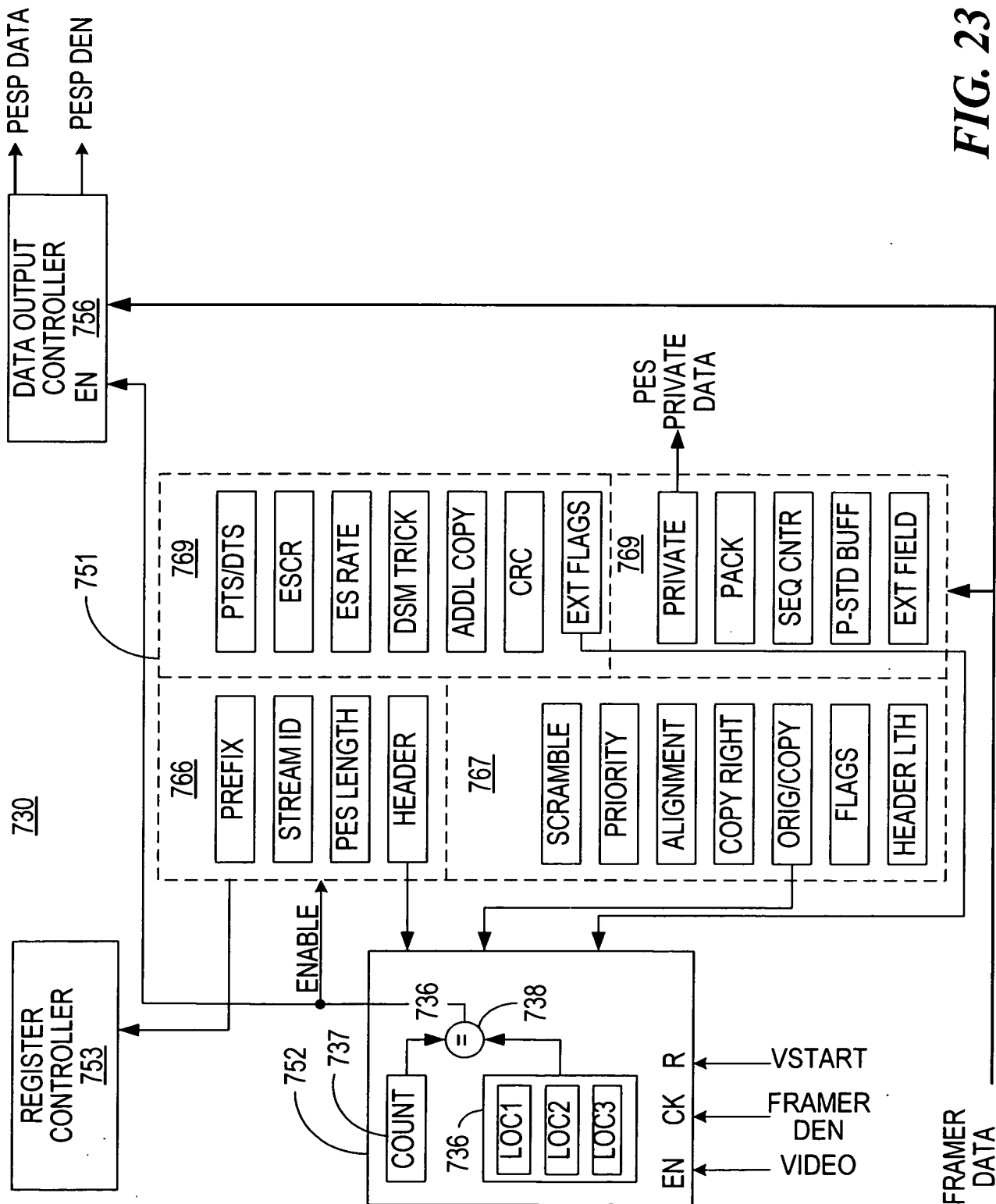


FIG. 23



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FIG. 24

Transport Demultiplexer Global Status Register			
Field Name	Bits Len Default	Type	Description
VideoPESHeaderAvailable	12 [1] 0	R/W	This bit is set to '1' when the new PES header of the video stream is received. WR_ACC_CLEAR.
VideoPESHeaderError	13 [1] 0	R/W	This bit is set to '1' after an error in the PES header is found. WR_ACC_CLEAR.
VideoPESDataAlignment	14 [1] 0	R/W	This bit is set to '1' when video PID has AF data_alignment_flag, indicating a possible start of I frame. WR_ACC_CLEAR.
VideoPESDSMTrickMode	15 [1] 0	R/W	Indicates that DSM data is found and extracted. WR_ACC_CLEAR.
VideoPESPrivateData	16 [1] 0	R/W	This bit is set to '1' when video PID has 16 bytes of private data in the PES header. WR_ACC_CLEAR.
VideoPESCRCErr	17 [1] 0	R/W	This bit is set to '1' if the video CRC of the PES parser found a CRC mismatch. WR_ACC_CLEAR.

FIG. 25

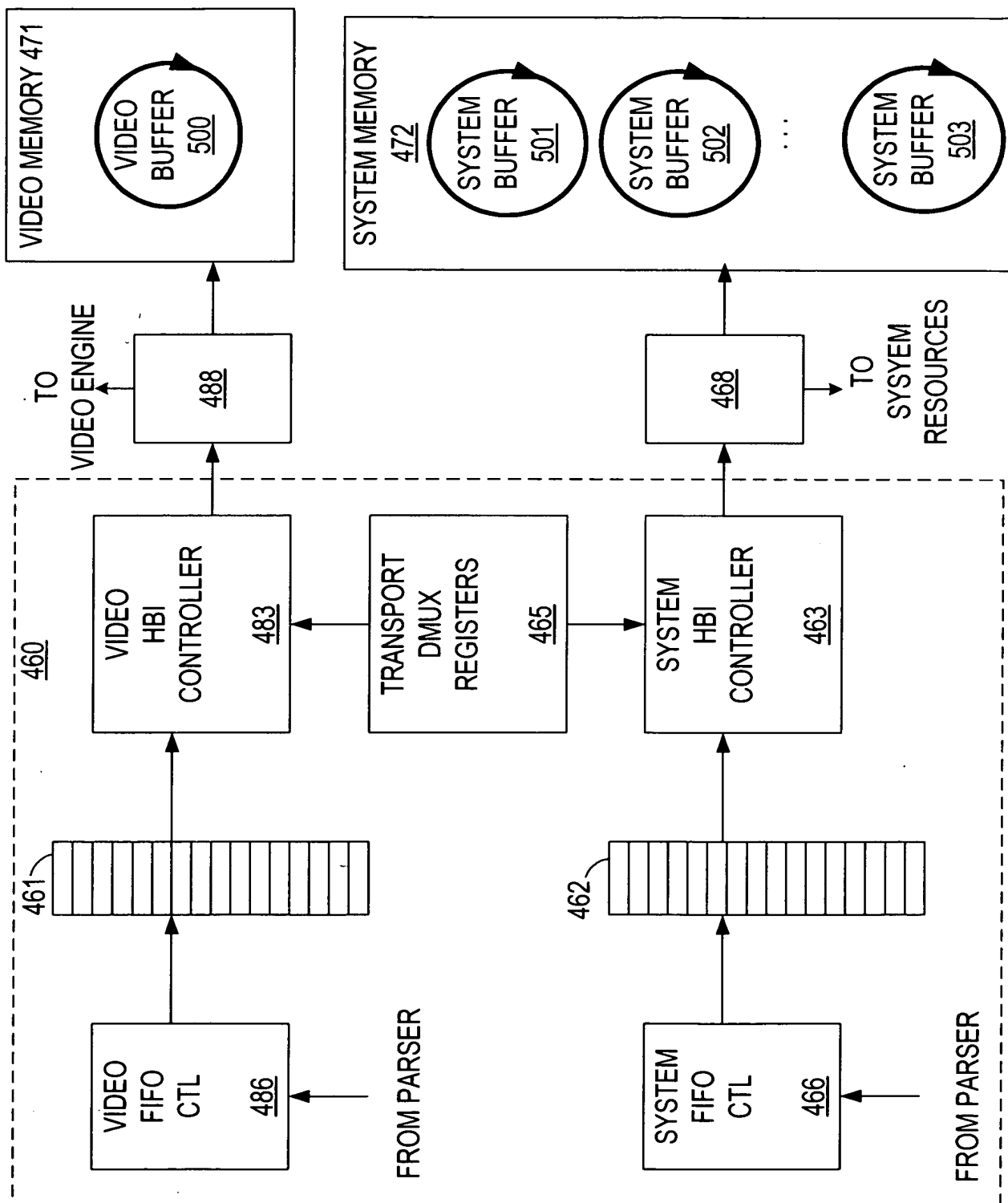
Transport Demultiplexer Interrupt Mask Register			
Field Name	Bits Len Default	Type	Description
EventInterruptMask	0-18 [19] 0	R/W	If set to '1' enables local sources Bit 12 – VideoPESHeaderAvailable Bit 13 – VideoPESHeaderError Bit 14 – VideoPESDataAlignment Bit 15 – VideoPESDSMTrickMode Bit 16 – VideoPESPrivateData Bit 17 – VideoPESCRCErr Bit 18 – VideoPTSRReceived Bit 19 – VideoESCRReceived

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FIG. 26



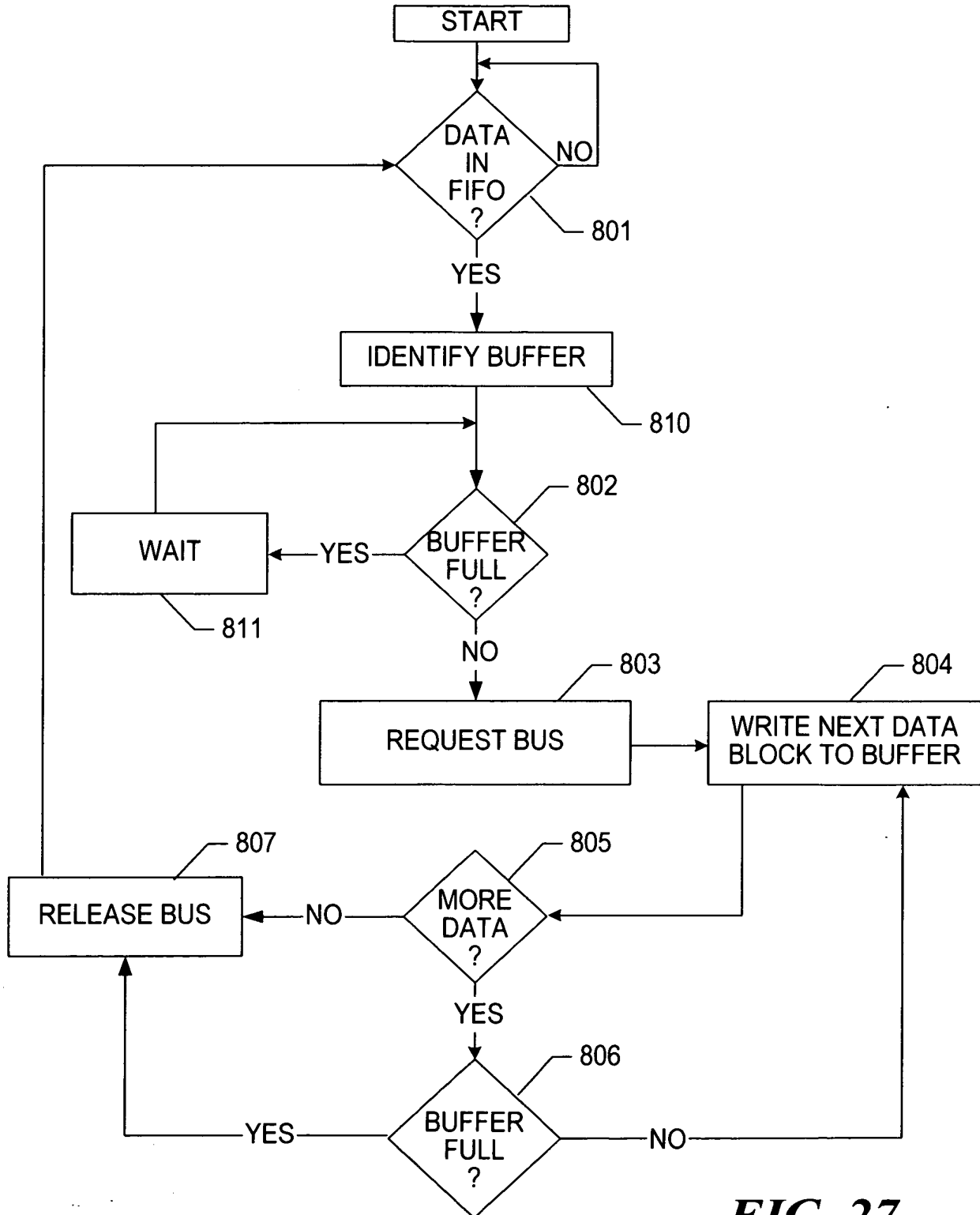


FIG. 27

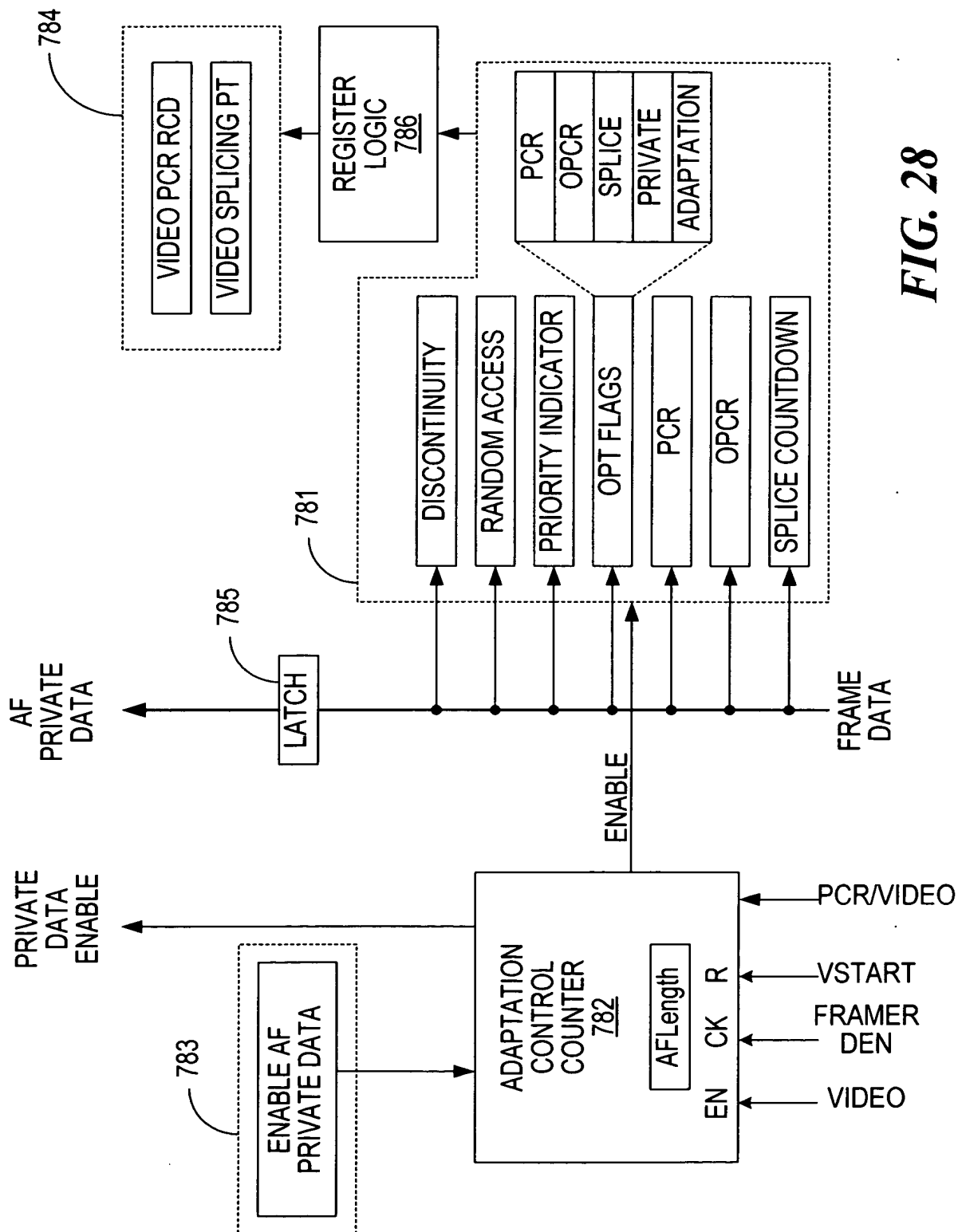


FIG. 28

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Transport Demultiplexer Global Status Register				Description
Field Name	Bits	Len	Default	
VideoAFPcrReceived	[1]	0		This bit is set to '1' after arrival and extraction of PCR sample in the adaptation field. WR ACC CLEAR.
VideoAFPcrDiscontinuity	[1]	0		This bit is set to '1' when a <i>discontinuity_indicator</i> in the adaptation field of the PCR PID is asserted. WR ACC CLEAR.
VideoAFDiscontinuityFlag	[1]	0		This bit is set to '1' after a <i>discontinuity_indicator_flag</i> has been asserted in the AF of video TP, indicating a discontinuity on continuity_counter. WR ACC CLEAR.
VideoAFRandomAccess	[1]	0		This bit is set to '1' when video PID has <i>random_access_flag</i> asserted in the AF, indicating a start of the elementary stream. WR ACC CLEAR.
VideoAFSplicingFlag	[1]	0		This bit is set to '1' when video PID has <i>splicing_point_flag</i> asserted in the AF, indicating approaching of the splicing point. WR ACC CLEAR.
VideoAFSplicingPoint	[1]	0		This bit is set to '1' when video PID has <i>splicing_point_flag</i> asserted in the AF, after splicing point occurred (<i>splice_countdown</i> = 0). WR ACC CLEAR.
VideoAFPrivateData	[1]	0		This bit is set to '1' when video has AF private data. WR ACC CLEAR.
AFSpliceCountdown	[8]	0x00		Current splice countdown value from adaptation field of A/V packets. Modified on the fly by AF content

FIG. 29



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Transport Demultiplexer Interrupt Mask Register			
Field Name	Bits	Len	Type
EventInterruptMask	0-18	[19]	0
			R/W
			Description
			If set to '1' enables local sources
			Bit 5 – VideoAFPcrReceived
			Bit 6 – VideoAFPcrDiscontinuity
			Bit 7 – VideoAFDiscontinuityFlag
			Bit 8 – VideoAFRandomAccessFlag
			Bit 9 – VideoAFSplicingFlag
			Bit 10 – VideoAFSplicingPoint
			Bit 11 – VideoAFPrivateData

FIG. 30

Transport Demultiplexer Global Control Register			
Field Name	Bits	Len	Type
EnableAFPrivateData	[1]	0	R/W
AFPrivateDataBufferIndex	[4]	0	R/W
PCRIndex	[1]	0	R/W
EnableAutoSplicing	[1]	0	R/W
			Description
			If '1' enables parsing and routing of AF private data
			Specifies 1 of 15 destination buffers in the system memory

FIG. 31

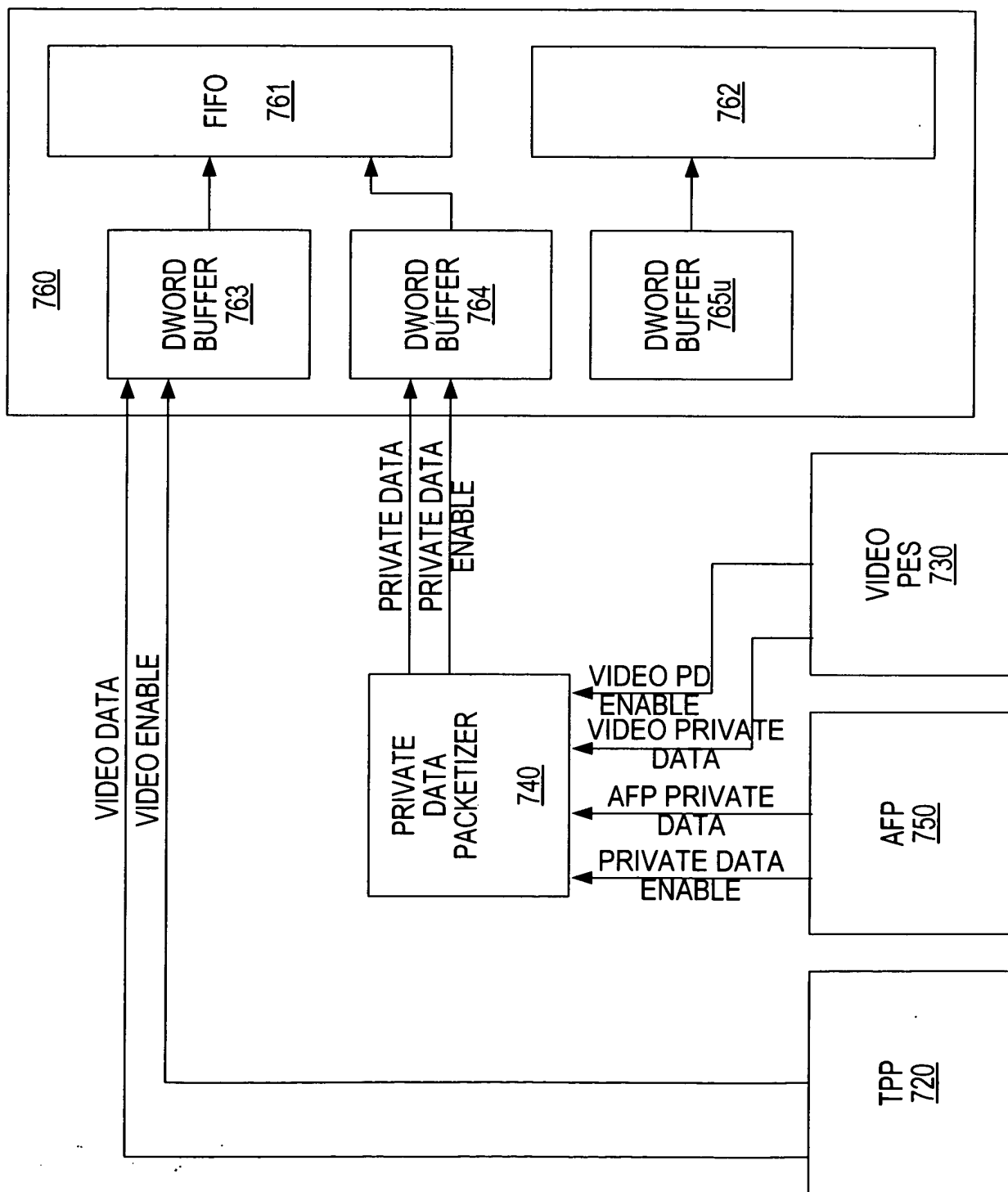
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FIG. 32



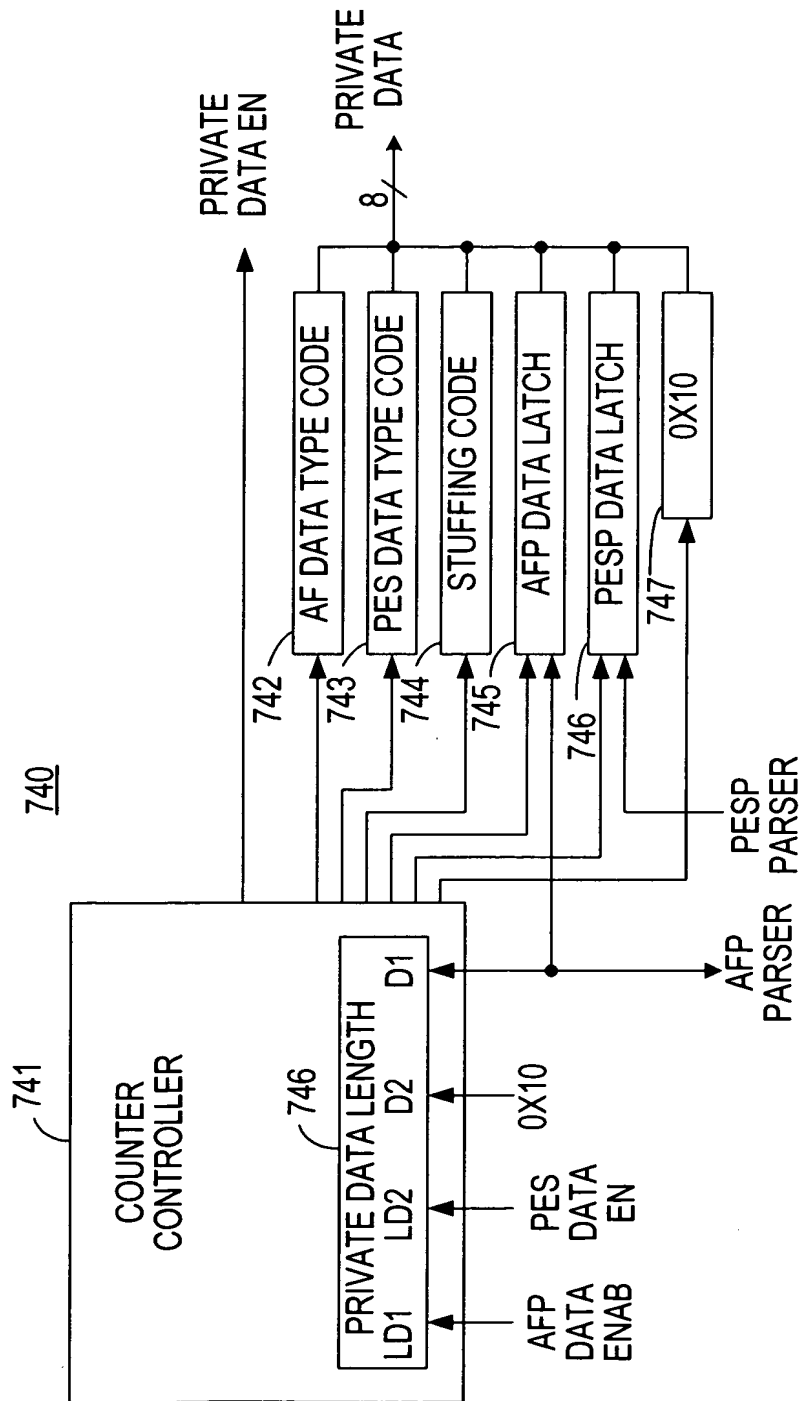


FIG. 33

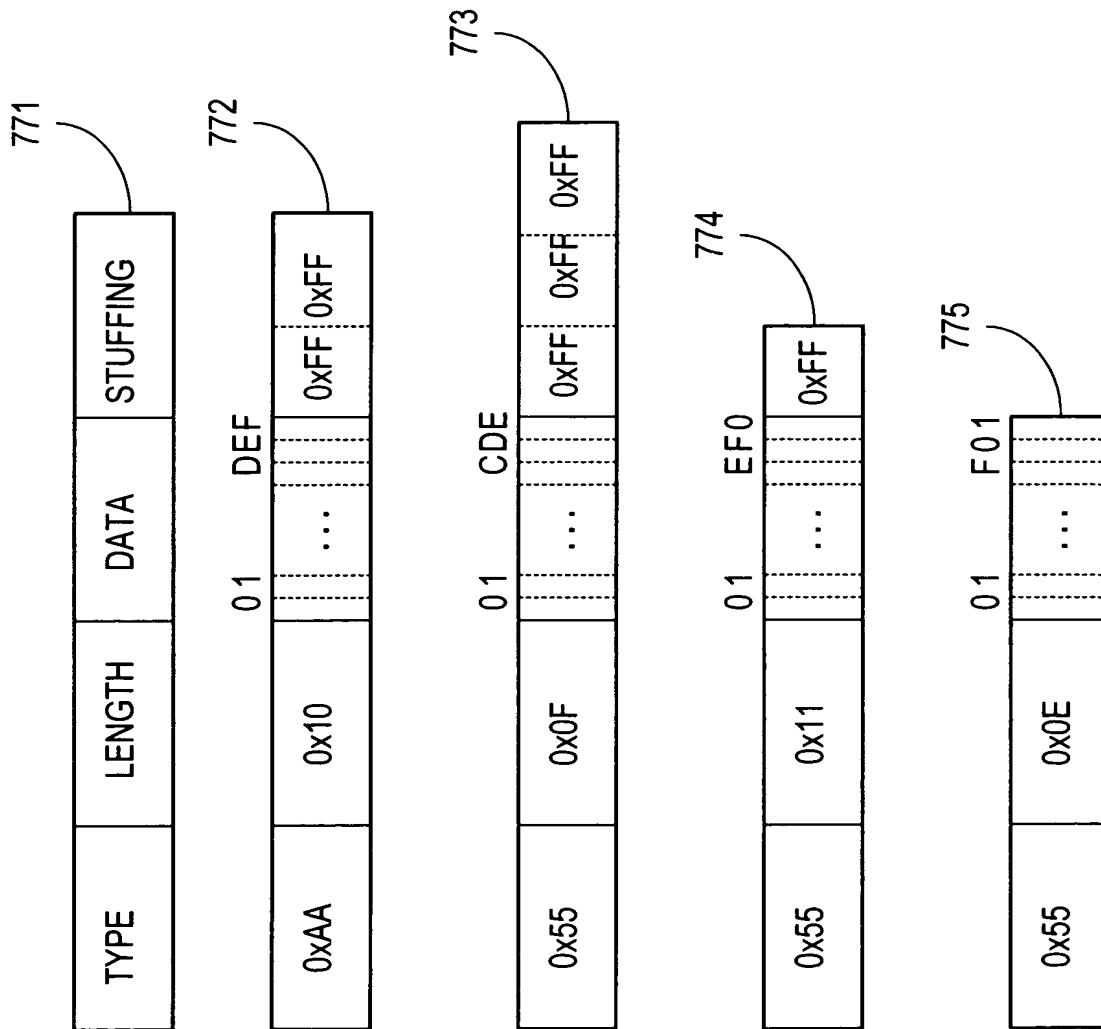


FIG. 34

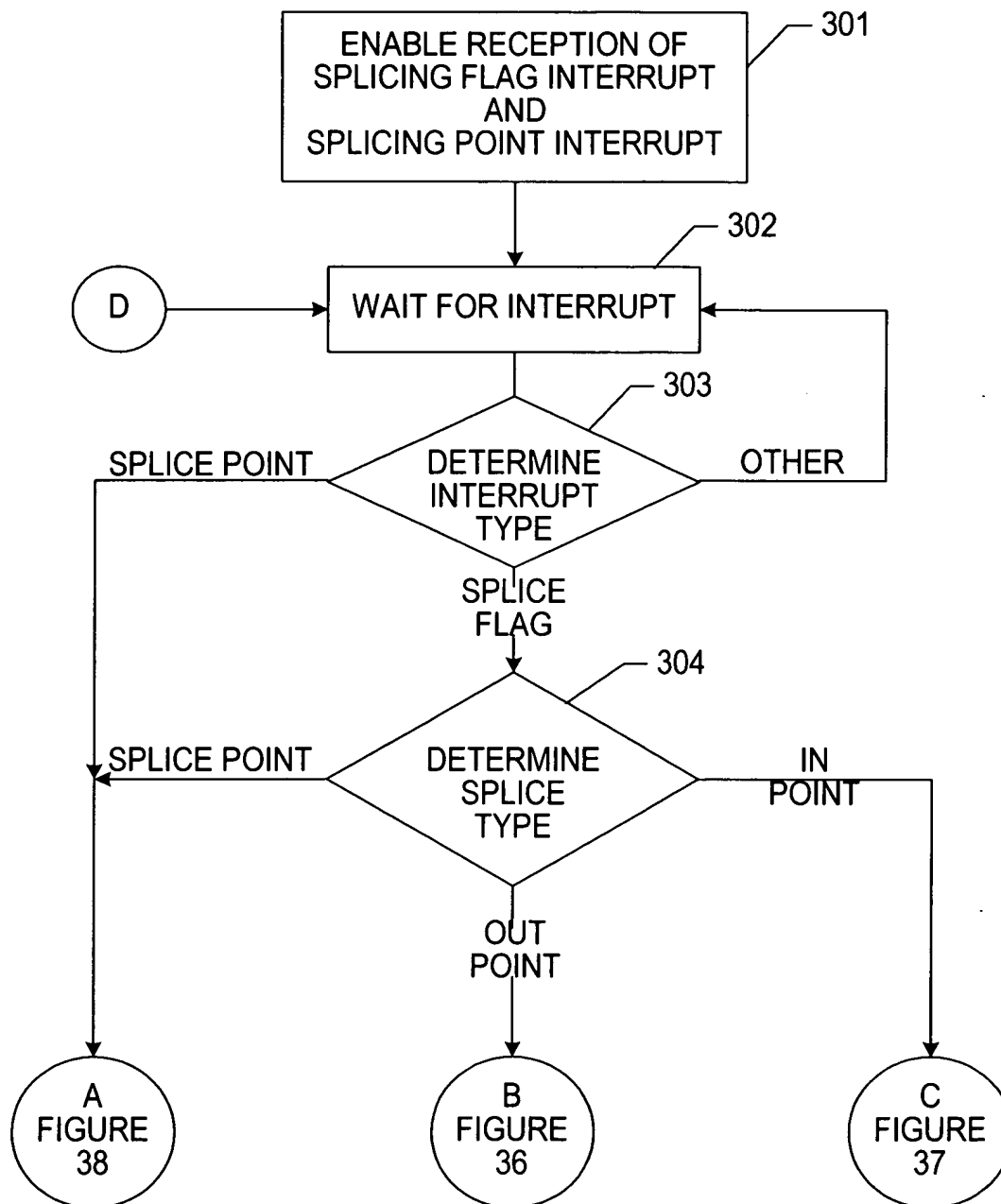


FIG. 35

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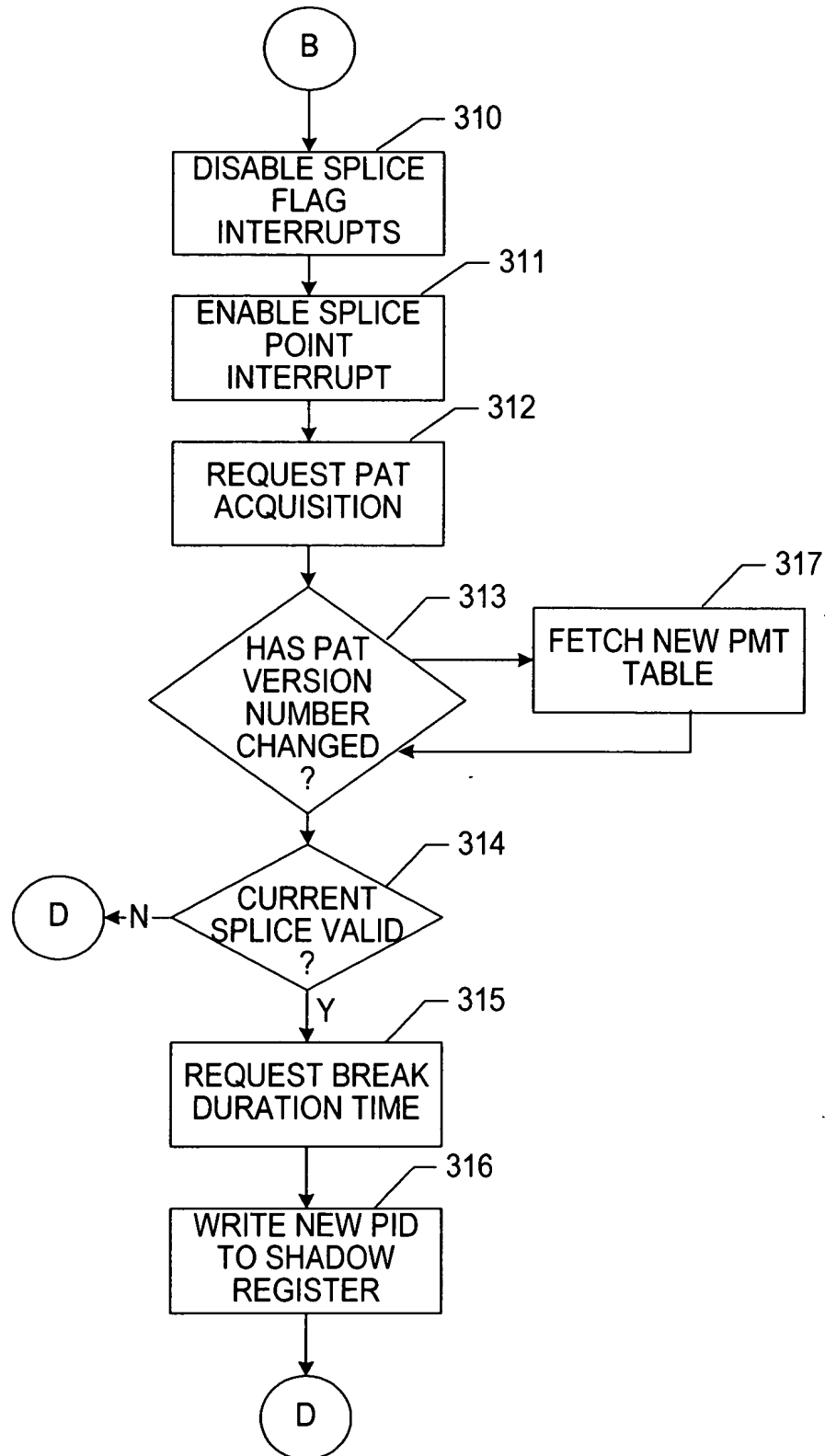


FIG. 36

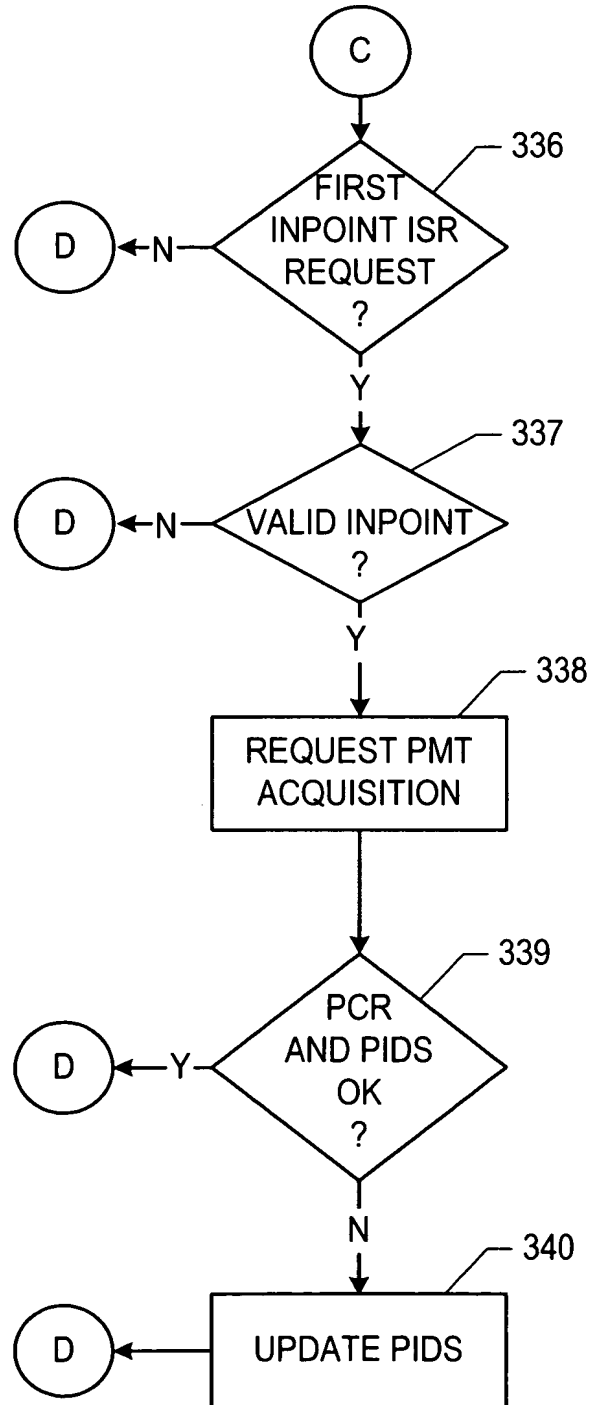


FIG. 37

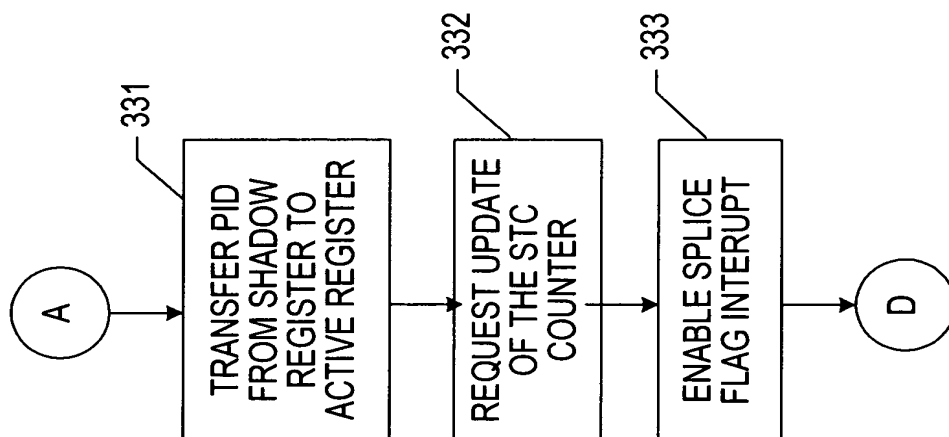


FIG. 38

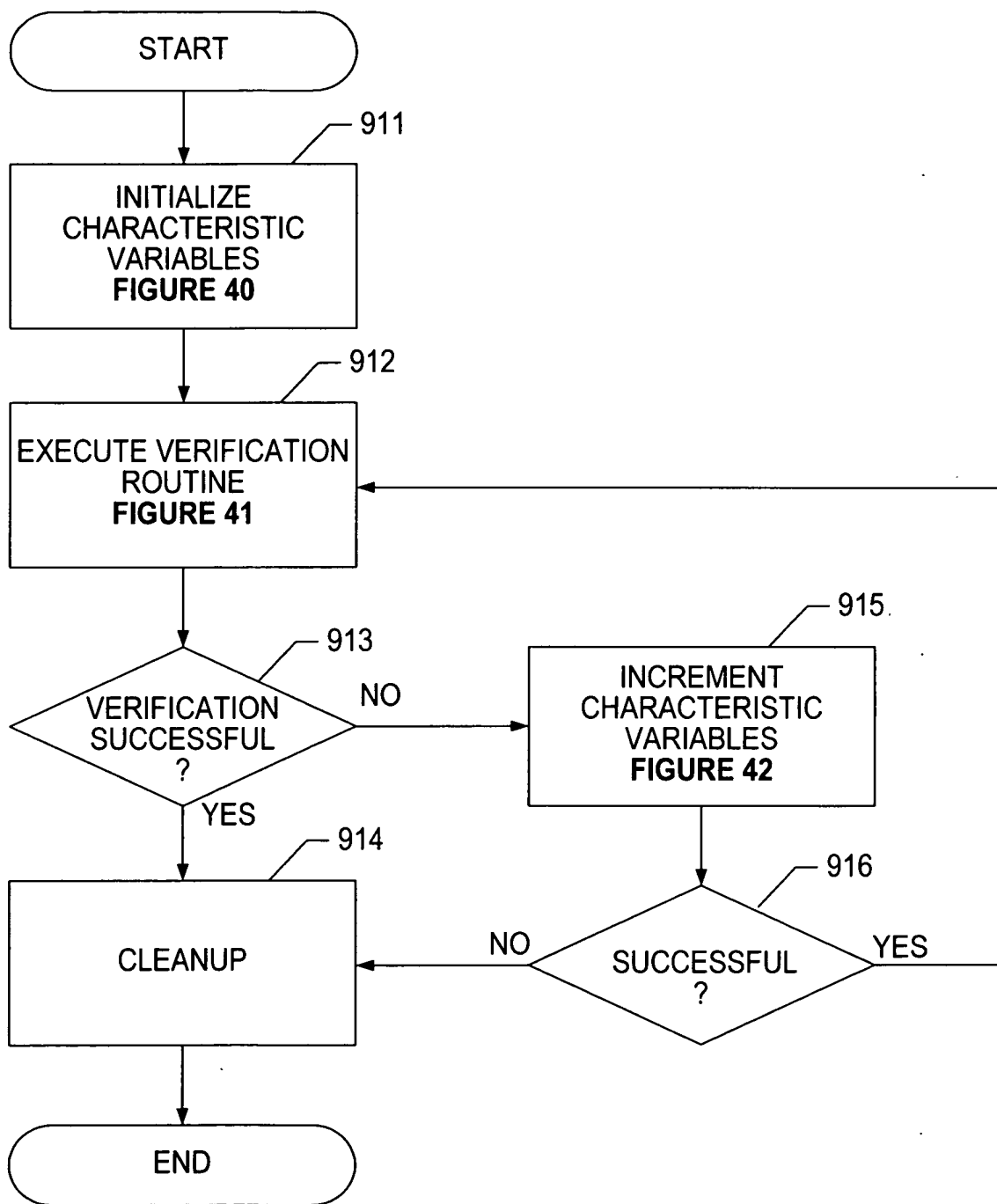


FIG. 39

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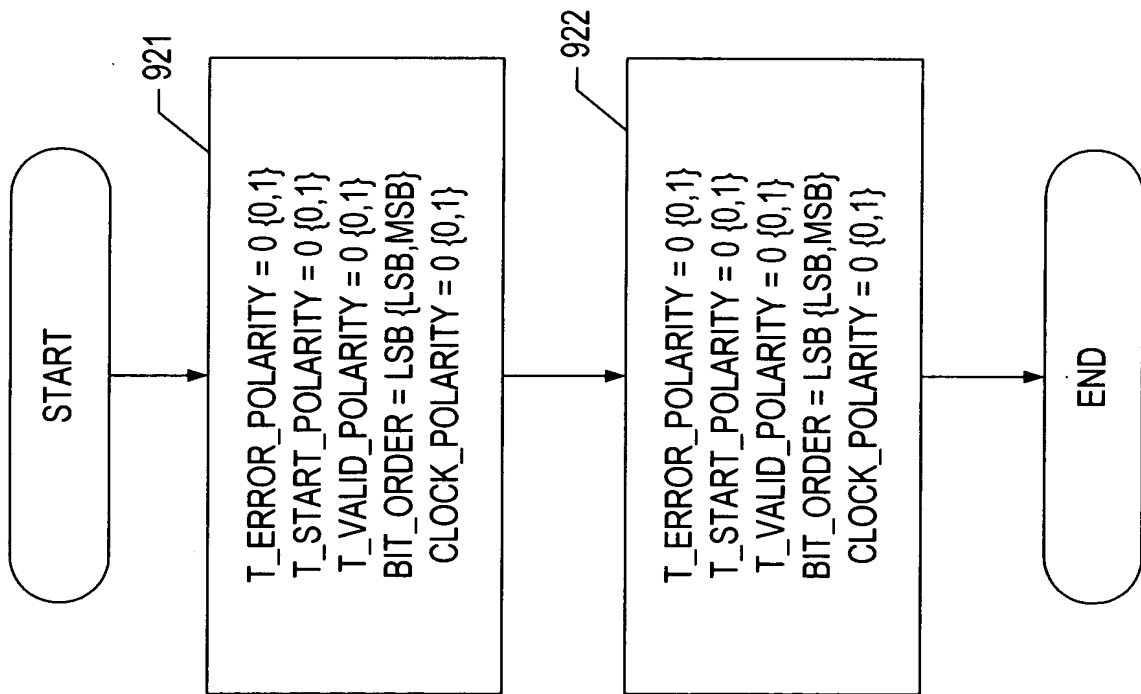


FIG. 40

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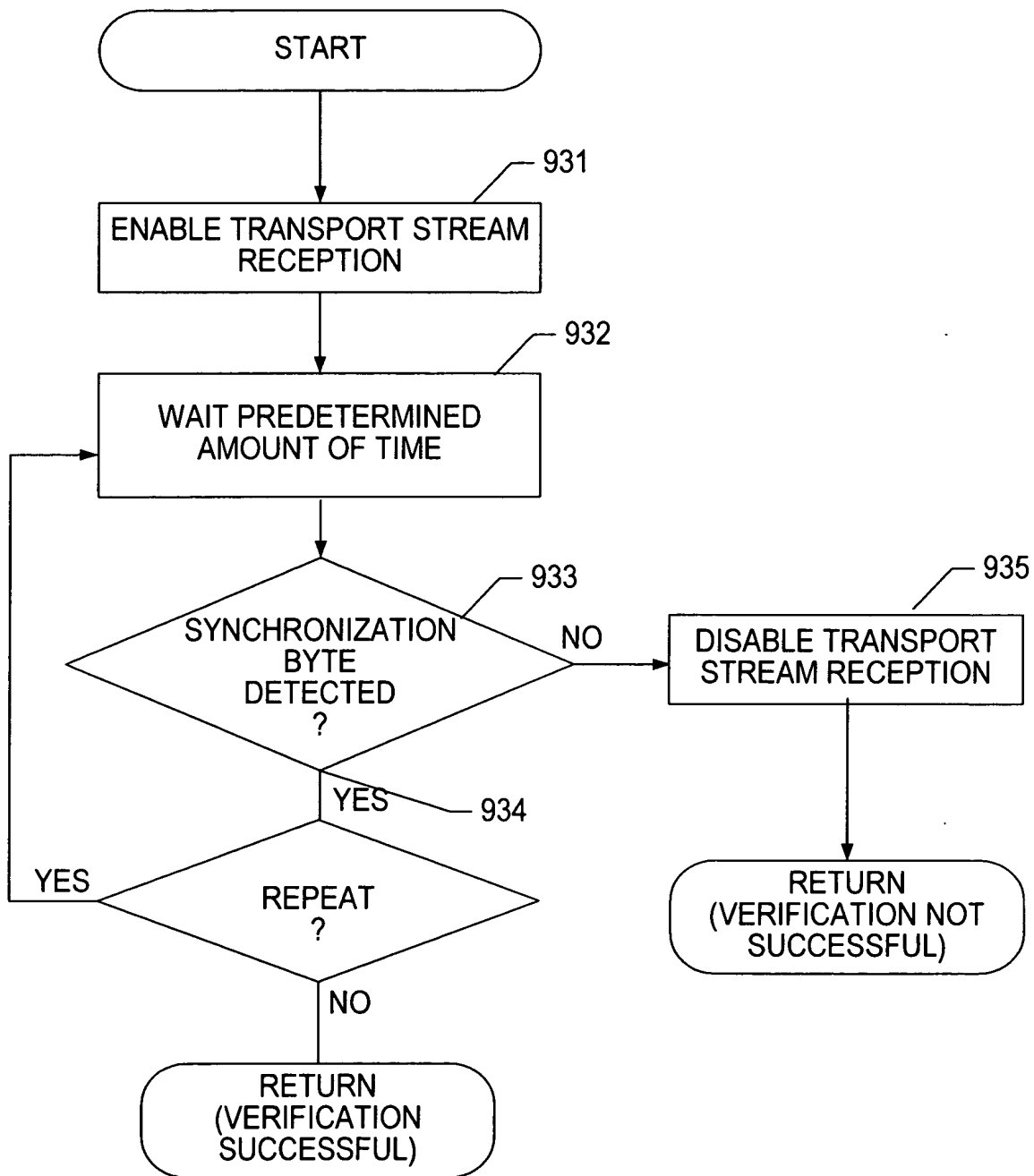


FIG. 41

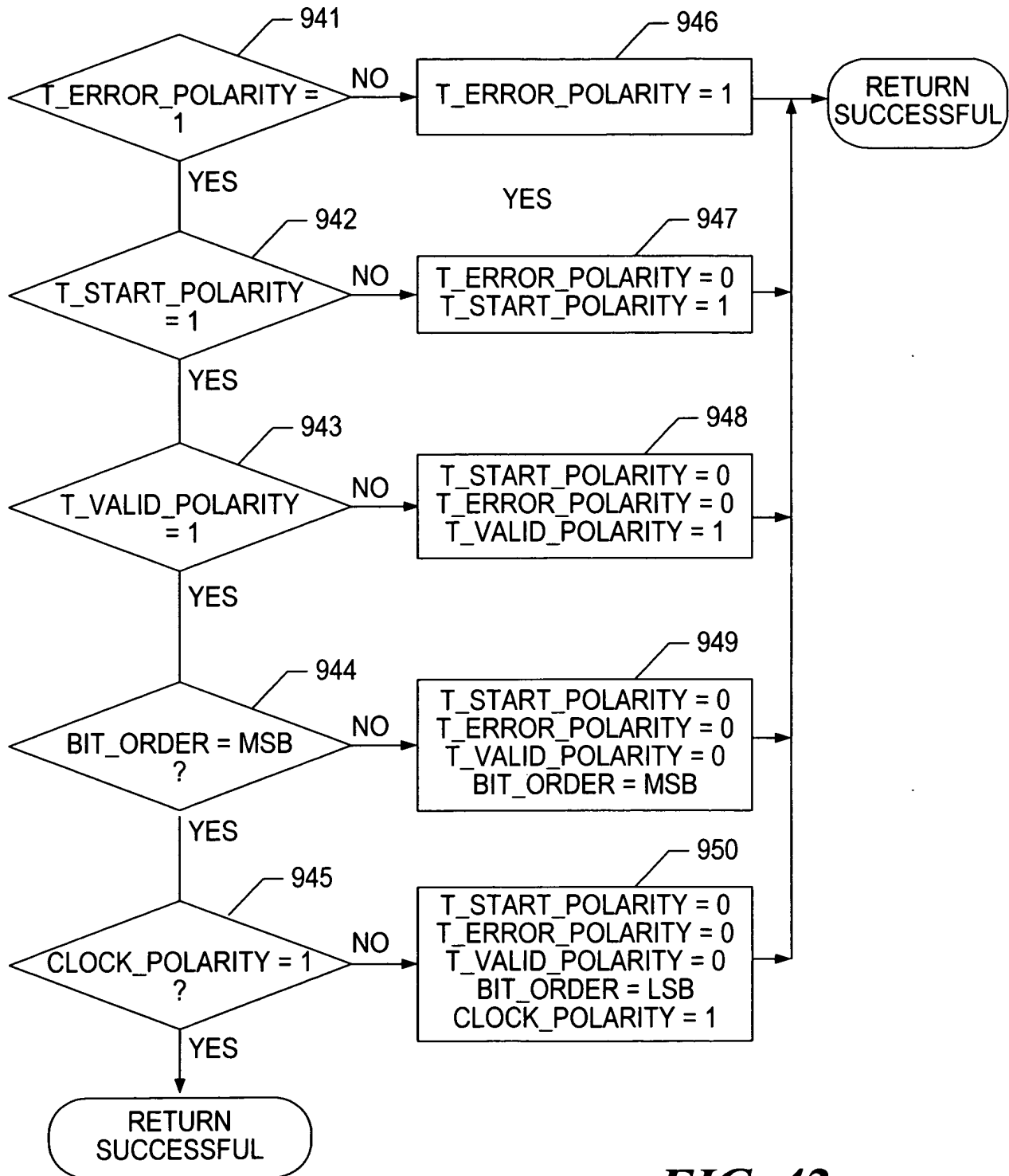


FIG. 42

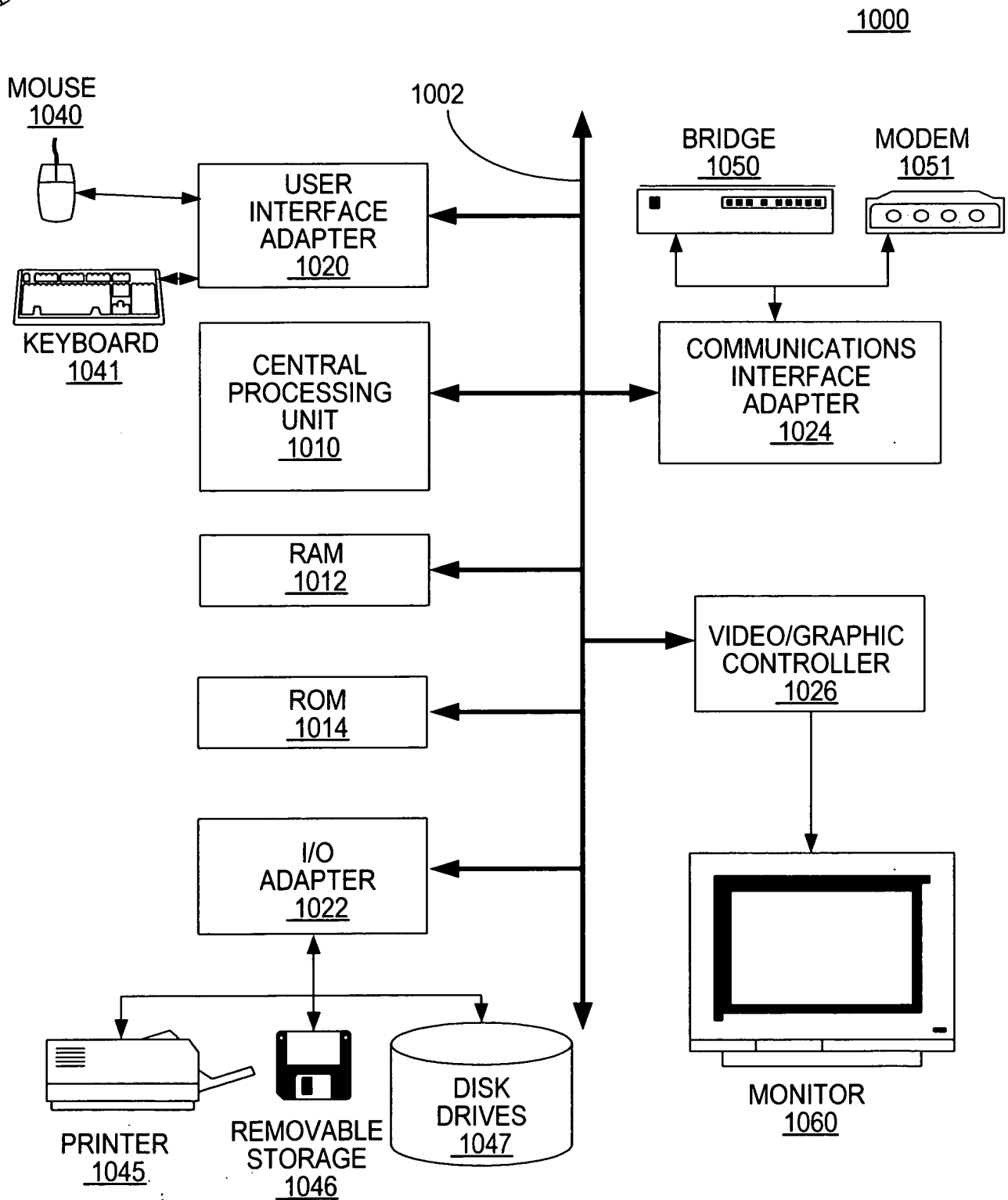


FIG. 43